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DEEP WATERWAY TO THE COAST.

Since the appropriation for continuing the work of experimental surveys of a deep waterway between the Great Lakes and the sea has been made, the commissioners in charge are putting several new surveying parties in the field. Of the old parties two are at work in the Mohawk valley and one is surveying the route between the Hudson river near Troy and the headwaters of Lake Champlain at Whitehall.

A new party is being formed to survey the Hudson river from Troy to deep water, thirty-six miles below, to determine the character of the work to be done to increase the 12-foot channel that already exists to the depths contemplated for the deep canal; another will investigate the character of the bottom of Lake Erie at the head of the Niagara river to determine the practicability of building a dam there for regulating the lake levels.

The last parties to begin work will be those who will survey the route from the foot of Lake Champlain to Lake St. Francis, in the St. Lawrence river, and the St. Lawrence river itself from Ogdensburg to Lake St. Francis. The route selected for study from Lake St. Francis to Lake Champlain is about forty-five miles long.

RUSSIAN SHIPPING ENTERPRISE.

The new law abolishing the custom duties upon ships built abroad and imported into Russia is already bearing good fruit, as is shown by the fact that the Minister of Finance has up to the present received no less than 11 applications for the authorization to establish large shipping companies. The most important, says the Financial News, is the one to be called into existence upon the initiative of Vice-Admiral Makarov, viz., the Cronstadt-Russian Steamship Co., with a capital of 15,000,000 roubles. The voyages are to be made to the eastern ports—Vladivostok, Talienwan and Port Arthur—as well as to the mouths of the rivers Ob and Yenissei. Six other companies are in course of promotion in Odessa, Novorossisk and Feodosia, while in the autumn two more companies will be formed in St. Petersburg, and two in Windau and Libau. The intended orders for battleships are very important. Eight naval vessels after the latest English and German style, sixteen armored cruisers, three transports, thirty torpedo boats, and several destroyers, involving altogether an expenditure of 195,000,000 gold roubles, and extending over a period of five years, are to be contracted. The United States, England and Germany are likely to receive the greater portion of the orders, as only a very small number can be built in Russia, owing chiefly to the want of nickel and steel material.

A MASTERPIECE FROM CRAMP'S SHIPYARD.

The Japanese cruiser Kasagi sailed into Portsmouth, N. H., a few days ago, after having made a speed average of 22¾ knots an hour, a quarter of a knot above the contract requirements, for a distance of forty miles. The trial was made under conditions not the best, which tended to show the vessel's performance in stronger light. The most striking result of the trial was the uniform improvement in the working of the machinery. The revolutions rose steadily, and absolutely nothing went amiss. The design of the screw of the Kasagi seems perfect.

JAPAN'S GREAT STEEL PLANT.

Japan is now building a great steel plant. The works will cost \$10,000,000, and will be put into operation within three years. The product of the plant for the first year will be almost exclusively steel rails, and probably some steel plates for ships. Boiler plates, bar steel and structural iron will follow in order. This steel plant, which will be situated at Yawatamura, a town of about 10,000 inhabitants, is on the extreme northern end of the island of Kishiu. This island, according to reports, is rich in coal.

LLOYD'S REGISTER SHIPBUILDING RETURNS.

FOR THE QUARTER ENDED 30TH JUNE, 1898.

From the returns compiled by Lloyd's Register of Shipping, it appears that, excluding warships, there were 580 vessels of 1,322,068 gross tons under construction in the United Kingdom at the close of the quarter ended 30th June, 1898. The particulars of the vessels in question are as follows, similar details being given for the corresponding period in 1897 for the purpose of comparison:

DESCRIPTION.	JUNE 30, 1898.		JUNE 30, 1897.	
	NO.	GROSS TONNAGE	NO.	GROSS TONNAGE
STEAM.				
Steel	507	1,311,402	343	850,869
Iron	52	8,665	50	8,205
Wood and Composite	3	214	3	209
Total	562	1,320,281	396	859,283
SAIL.				
Steel	2	340	11	9,768
Iron .....	.....	.....	1	226
Wood and Composite	16	1,447	27	2,384
Total	18	1,787	39	12,378
Total Steam and Sail	580	1,322,068	435	871,661

From December, 1896, the returns of Lloyd's Register have shown a steady increase in the amount of tonnage under construction in the United Kingdom. By the end of 1897, the work in hand reached a total of 1,013,000 tons. These figures—themselves almost certainly without precedent in the history of the shipbuilding industry—are now exceeded by no less than 309,000 tons.

The following details concerning the shipbuilding work of the United Kingdom during the past three months may be added:

DURING QUARTER ENDED JUNE 30, 1898.	STEAM.		SAIL.	
	NO.	GROSS TONNAGE	NO.	GROSS TONNAGE
Vessels commenced	186	433,686	2	270
Vessels previously commenced, but on which no further progress has been made	4	1,700	4	315
Vessels launched	225	412,269	5	2,428

The following table apportion the vessels now under construction in the United Kingdom to the countries for which they are being built:

COUNTRY FOR WHICH INTENDED.	STEAM.		SAIL.		TOTAL.	
	NO.	GROSS TONNAGE	NO.	GROSS TONNAGE	NO.	GROSS TONNAGE
United Kingdom	456	1,073,679	9	912	465	1,074,591
British Colonies.	9	17,090	.....	.....	9	17,090
Austria	1	3,340	.....	.....	1	3,340
Belgium	6	12,941	.....	.....	6	12,941
Chili	1	2,553	.....	.....	1	2,553
Denmark	11	24,092	.....	.....	11	24,092
France	3	5,040	.....	.....	3	5,040
Germany	8	41,996	.....	.....	8	41,996
Greece	1	3,370	.....	.....	1	3,370
Holland	10	22,683	.....	.....	10	22,683
Japan	9	31,250	.....	.....	9	31,250
Norway	6	14,173	.....	.....	6	14,173
Portugal	1	230	.....	.....	1	230
Russia	16	30,190	.....	.....	16	30,190
Spain	2	4,508	.....	.....	2	4,508
Sweden	4	4,200	.....	.....	4	4,200
For Sale, or Nationality of Owners not stated	18	28,946	9	875	27	29,821
Total	562	1,320,281	18	1,787	580	1,322,068

The Glasgow district shows 128 vessels under construction,

Greenock 69, Newcastle 80, and Sunderland 59, minor districts having a lesser output, although Belfast with only 24 vessels has an aggregate tonnage of 193,550, or each bottom having a tonnage exceeding 8,000. At royal dockyards there are 16 naval vessels and 74 under construction at private yards.

THE ELECTRICAL INDUSTRIES AT SAULT STE. MARIE, MICH.

There was a meeting of the Northwestern Electrical Association at Sault Ste. Marie on June 11th, to whom Mr. F. H. Clergue, of the Sault Ste. Marie Pulp and Paper Co., who is also largely interested in other industries there, made a welcoming address. Speaking of the electrical industries of the place Mr Clergue said:

The progress of electricity has developed this one fact which is familiar to all of those who are practically conscious of the progress of that science, and that is that the power necessary to develop light, heat or electricity, or any other manifestation of force, must be produced by some method more economical than that of steam power, if it is to be applied to those commoner uses of mankind, such as the production of necessary articles of low intrinsic value which the civilized races put most to their uses—the metals.

We now have before us the manifestation that it is cheaper to-day to smelt common iron worth \$12 a ton in an electric furnace than it is to use coke at \$4 a ton for that purpose, to produce the same degree of heat. This is a remarkable statement, but it is proven in the twin cities of the Sault.

You are on a journey of great consequence to the region you visit. It is of importance to this community that you should understand what are our relations to the industry which you especially represent. When you pass these locks you will have crossed the threshold of the most important storehouse of wealth on the face of the globe.

The author then referred to the enormous wheat districts tributary to Lake Superior, the tremendous quantity of lumber available in the wilderness of Canada, north of the lake, and spoke as follows of the metals:

It is a fact shown by statistics that out of this lock, through which you pass to-morrow, there went last year out of Lake Superior 4,000,000 tons more of iron ore than all Great Britain made into pig iron in twelve months of the same year. The greatest in extent and purest in quality of all the iron ore beds ever discovered are those on the shores of Lake Superior. Steel rails in the United States are produced at a cost of from \$4 to \$5 a ton less than they are in England. It is a fact that at the Sault the first necessary ingredient, except ore, for the production of coke pig iron, viz., coke, could be delivered to smelters here at Sault Ste. Marie at half a dollar a ton less than coke costs delivered to smelters in Great Britain. Steel plates for shipbuilding on the shores of these lakes are produced and delivered at \$7 a ton less than in Great Britain. It is true also that within five years the center of iron ship building will not be in England, but in America. It is true that on these Great Lakes, at Chicago, Cleveland and at Superior, iron shipbuilding can be done at a cost of several dollars less per ton than is possible in Great Britain. * * *

While we began in the electrical industry here in the development of new electrical processes, only two or three years ago, we have already accomplished this much, that we are under contract to deliver 40,000 horse power for electrical uses, all to be supplied within two years. We have already developed on the Canadian side 20,000 horse-power and are about to undertake the construction of another canal on the Canadian side to produce 50,000 horse-power.

It is the fall of twenty feet from Lake Superior to Lake Huron that has created the existing enterprises here, and which gives us such great hope for the future industrial prosperity of this region.

NEWS AROUND THE LAKES.

CHICAGO.

Special Correspondence to The Marine Record.

At the Chicago floating dry dock the tug E. G. Crosby is receiving a new stern bearing.

J. J. Rardon & Co. chartered the steamer City of London for clipped oats to Buffalo at $\frac{3}{4}$ of a cent.

Capt. John Prindiville chartered the steamer Vulcan for oats to Buffalo at $\frac{3}{4}$ of a cent and the steamer Geo. G. Hadley for corn at $\frac{3}{4}$ of a cent.

The steamers R. P. Fitzgerald and J. W. Westcott are receiving repairs at the Milwaukee dry dock. The Fitzgerald's work is practically a rebuild.

The excessive heat this week is driving thousands of the city's inhabitants to seek comfort on Lake Michigan and at pleasure resorts surrounding the lake and all the excursion steamers are doing a large business.

Capt. Joseph Corcoran, of the Anchor line steamer Mahoning, who arrived here Monday morning reports that it was very smoky and dangerous to navigation around the Beavers, Fox and Manitou Islands and a considerable distance up Lake Michigan.

William Halverson, of this port, a sailor on the schooner Lucia A. Simpson, fell from the crossbeams to the deck on Tuesday, while the vessel was off Racine. He received fatal injuries. The injured man was removed to the hospital at Milwaukee, but he died shortly after reaching there.

Repairs have been completed on the schooner St. Peter and she cleared on Tuesday. The damage was caused through her running into a dock at South Chicago. The dock didn't collide with her but she tested its construction and incidentally her own too. Repairs forward and new head gear placed her as good as she was before.

We caught the dirty squally weather announced by the Weather Bureau this week, and this end of Lake Michigan had a shaking up for a while on Tuesday evening, the squalls registering sixty miles an hour. The damage to vessel property was light, though the water rose four feet in as many minutes in the Calumet river, and came near flooding the dock property.

The Hines Lumber Co. at this port have purchased the steamer Lewis Pahlow and consort Delta, from the Delta Lumber Co. The Pahlow is rated $A1\frac{1}{2}$ and valued at \$17,000 in Inland Lloyds register. She was built by the Milwaukee Shipyard Co. in 1882 and was named after that company's then well known and much respected foreman. The Delta is rated $A1\frac{1}{2}$ and valued at \$8,000 in Inland Lloyd's register. She was built at Algonac in 1890.

A race for a cup valued at \$500 has been arranged between the steam yachts Say When, of Cleveland and the I. C. U., of Detroit, from Chicago to Racine. The race will take place early in August. The two boats are said to be the fastest steam yachts now on the lakes and the trial of speed will be an event of much interest in yachting circles. The Say When is owned by Ex-Congressman W. J. White and was beaten by the Connor yacht Enquirer, of Buffalo, although the Say When is a handsome, speedy craft and in smooth water is likely to give a very good account of her speed, but it is thought here of those who have seen the yacht that she would be handicapped if the water is anyway lumpy on the day of the race.

Capt. James S. Dunham, president of the Chicago River Improvement Association, has issued the following notice under date of July 19th: There will be a very important meeting of the Chicago River Improvement Association, in the rooms of the Lumbermen's Association, Old Colony Building, on Thursday the 21st inst, at 2:30 p. m., to consider improving the river at Taylor street, 18th street, and about 23rd street. Members of the drainage board, city officials, gas companies and railroad representatives are expected to attend. As the necessity for action is urgent, your attendance at this meeting is especially required.

Alderman Miles Barry has, after more than a year's persistent efforts, succeeded in getting a change made in the bridge closing ordinance, which will greatly aid navigation on Chicago river. Hereafter the time for keeping the bridges closed in the morning will be from 6:30 to 8 a. m., between Rush and Twelfth streets. There will be no limited time for closing the bridges in the morning in the north branch, or in the south branch south of Twelfth street. The bridge closing hours in the evening will be the same as in the past. Now that a wedge has been so successfully driven into the ordinance it is hoped that it will soon be driven in still further and that some concessions will also be made in the evening bridge closing hours.

The stocks of grain in the Chicago elevators last Saturday evening were 375,000 bushels wheat, 8,062,000 bushels corn, 447,000 bushels of oats, 47,000 bushels of rye, and 10,000 bushels of barley. Total, 8,961,000 bushels of all kinds of grain, against 13,189,000 bushels a year ago. For the same date the secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 10,461,000 bushels of wheat, 19,987,000 bushels of corn, 5,572,000 bushels of oats, 460,000 bushels of rye, and 385,000 bushels of barley. These figures are smaller than the corresponding ones of a week ago by 2,055,000 bushels of wheat, 2,868,000 bushels of corn, 368,000 bushels of oats, 418,000 bushels of rye, and larger by 11,000 bushels of barley. The

visible supply of wheat for the corresponding week of a year ago decreased 2,013,000 bushels.

The lumber shovers stripped to the waist while discharging cargoes in the heat of the sun used to show people what hard labor meant, but, shoveling iron ore inside of a heated metal tank is what the boys at South Chicago had to contend with this week, as they have for weeks before and will again. With the heat of labor and the sun warming up the decks and sides of the large steel vessels, the shovelers had to cave in until water was poured on the decks and sides of the iron ore vessels discharging at the Illinois Steel Co.'s plant. As an indication of what this work means, it is stated that it usually takes nine hours to remove the cargo of the steamer Maryland, but nine rigs worked all day at her on Monday, and it was Tuesday night before she was discharged. Two boats a day is as many as the steel company can handle now, in place of four or five, which they dispose of easily in the same period in spring and fall.

BUFFALO.

Special Correspondence to The Marine Record.

Capt. J. D. Peterson joined the steamer J. C. Lockwood this week.

The tug Erie was taken to the Union dry dock for repairs after collision with the Uganda on Sunday in Erie harbor.

The old steamer Niagara, which for many years made trips between Buffalo and Fort Erie, has been retired from service.

The damage to the machinery of the Anchor liner Delaware, resulting from the fire in her engine room at Erie, is quite heavy.

The man who is looking for a schooner in Chicago to convert her into a nautical academy would do better to build what he thinks he wants. The old schooners were not put together for the purpose of teaching the young idea how to shoot, but to gather ducats for their owners, and it would cost as much to rebuild one as it would to place an order for a new hull.

Harbormaster Robert C. Soper is having a gay old time with the excursion lines besides the general river traffic, and his time is now fully occupied. The easiest way is generally the best way to get along, but there is bound to be a scrap, more or less, now and then, and he has a police court case on hand this week on account of his instructions not being obeyed.

The Donnelly Wrecking & Salvage Co., of Kingston, received word from the Standard Oil Co., New York, to proceed at once to Hog Island, in the Cepar Rapids, and release the steel tank barge, owned by the Standard Oil Co. This is quite an undertaking, and if successfully accomplished will very much increase the prestige of the well-known Kingston firm of wreckers.

The Lake Erie Engineering Co. has been notified that the contract for four of the six disappearing gun carriages had been awarded to it. The bid was \$10,850 apiece, and each carriage will weigh about seventy tons. The first must be finished in seven months and the remainder at the rate of one every two months. The plans are kept strictly secret, and a government officer will see that the public does not get a view of the carriages until finished.

During the greater part of last week a long string of canal boats were lying two or three abreast in the canal west of the locks at Lockport waiting for repairs to be finished on the Rochester level so that they might resume their eastward journey. Boatmen are discouraged. From Buffalo to Lockport there is little likelihood of delay, but at Lockport their troubles begin, and at no time after entering the Rochester level is there certainty that they may escape enforced delay of from one to ten or more days on account of the leaks and breaks which are of weekly and even almost daily occurrence.

The tug Myrtle and the passenger steamer Idle Hour collided in the river on Saturday and for a time there was quite a mix-up and no little excitement. The tug's crew were canted overboard and the excursion boat had to land her passengers and proceed to the dry dock. Nothing serious resulted from the accident beyond what a few dollars could rectify, but, as the old refrain is, there might have been. A little dash like this in a river is no more than a pedestrian slipping on a sidewalk or meeting another fellow coming around a corner.

The United States Engineer Corps has opened headquarters at Ogdensburg, for the purpose of obtaining levels of Lake Ontario and the St. Lawrence river. Their work is in connection with the deep waterway project between the lakes and the coast. Had there been a ship canal between the lakes and the ocean, the government would of had at its command a magnificent fleet of merchantmen during the Spanish war, and a large sum would have been saved in providing colliers and transports. The vast advantages of a ship canal to tide water during war times have given the ship canal project considerable impetus. Besides the direct advantages, it is certain that if it were possible to construct war vessels on the lakes a large saving would be effected in the cost of the new navy.

CLEVELAND.

Special Correspondence to The Marine Record.

There is a little less detention at Lake Erie ports just now and iron ore is being handled in a remarkably rapid manner, although there is no improvement in the rate of freight.

The Lorain Times says: "There is a rumor out that the Cleveland Ship Building Co. has contracts for two more big boats, but the rumor could not be confirmed at the yard."

The Cleveland Ship Building Co. have been kept busy at their local plant this week as well as at the Lorain yards of the company. Repairs have just been completed on the steamer Flora.

The new revenue cutter Onondaga built by the Globe Iron Works Co is now ready for her official trial trip and will soon be turned over to the government. As usual in this class of departmental tonnage she is perfect in every way.

Capt. Benham held a survey this week on the small schooner Theo. Voges and ordered her to dry dock for full repairs and final survey. The Voges has been pretty well cleaned out forward with the loss of all her head gear, etc., through colliding with the steamer Ramapo on the 16th.

Mr. James Kenealy, at present official weather forecaster at Duluth, is slated for the change to this port, vice W. B. Stockman, detailed to duty in the West Indies. Mr. Kenealy has been in the service for about a quarter of a century and is highly spoken of by his co-workers and the departmental officers who are certain that Cleveland will be in no way slighted in the accuracy of weather predictions by the successor to Major Stockman.

The work of putting in the foundation for the east breakwater is progressing rapidly, with the prospect of getting the larger portion of it finished during the present season. The length of the new breakwater will be 3,000 feet. Work on the west breakwater is also progressing satisfactorily in charge of the well-known contracting firm of L. P. & J. A. Smith, who were the lowest and successful bidders on this large and important harbor work.

Complaints regarding the Sandusky tugboat service, or rather the lack of it, have been going the rounds this week. Competition is generally a good thing and if the reports continue it is likely that there will be more of it next season at Sandusky. The slack trade just now doesn't warrant very much of a splurge being made anywhere. At the same time Sandusky might be more careful of her record for good treatment of vessels frequenting that port.

The new steel steamer Presque Isle, Capt. Lowe, loaded 6,031 gross tons iron ore at Marquette this week and is now on her way down on her maiden trip. The Presque Isle was built by the Cleveland Ship Building Co. for the Presque Isle Transportation Co. and her first cargo showing up so good must be very gratifying to her builders and owners as it was not expected that she would be anything of a record breaker, but rather a good, handy boat with a fair carrying capacity. However, her cargo is the largest ever taken out of Marquette.

The large steel tow barge John T. Fritz, completed at the Wheeler yards under the general superintendence of Mr. Robert Logan, for the Bessemer Steamship Co., has cleared for Duluth, and the 475 feet steamer Samuel F. B. Morse will next be launched, the date being fixed for the 27th, which will also take place under the superintendence of Mr. Logan. The Morse will be the largest carrier on the lakes, as she is the largest in dimensions, and all other record carrying will pale before this "bull of the woods," or, as she is all of steel, "furnace breaker."

G. C. Barnes, president and treasurer of the Chase Machine Co., has sold his interest in the company to Frederick Metcalf, of Providence, R. I., who will become an officer of the company. Mr. Metcalf has been connected with the American Ship Windlass Co., and work of this kind may be made an important product of the Chase Machine Co. hereafter. The company has been manufacturing the Yeakley pneumatic hammer recently and has also made a specialty of hoisting engines, steam steerers, the Chase automatic fog signal and of repair work on dredge machinery. A meeting of stockholders will be held soon for an election of officers in view of the change in controlling interest.

Complaint has been made this week regarding shoal water at Lorain, and should the experience be repeated it is liable to work an injury to the port which has recently been springing into prominence again. Lorain at one time was quite a Lake Erie shipbuilding center and enjoyed a wave of progression which it might have taken better advantage of at the time. Now that it is again on the way to the top notch of industrial prosperity and getting ready to take rank as a safe and leading Lake Erie port, rumors of groundings in the river or harbor will not make Lorain so desirable a discharging place as it is actually entitled to. A little judicious dredging don't cost much and it means lots.

DETROIT.

Special Correspondence to The Marine Record.

The dry docks are receiving their share of work and getting all that is going. The steamer Panther has been docked for about a week, but she is ready for service again.

There is any quantity of business now for passenger and excursion boats; the hot weather of the past few days is sending large crowds afloat, and no opportunity is being missed of taking a sail on the river or lake when time permits.

The new wheat crop has been arriving here at a fairly brisk rate for the past few days, and C. W. Norton, who does all the grain chartering, placed a cargo at $1\frac{1}{4}$ cents to Buffalo. The consignment was not a large one, but the shipment and the rate of freight is a slight indication of improved times, and it is hoped that quite a few cargoes will be made up within the course of the next week or two.

FLOTSAM, JETSAM AND LAGAN.

The British tank steamer Lucilene at Philadelphia, has been bought by the government to carry fresh water to Cuba and elsewhere. The price paid is said to have been \$200,000. The Lucilene was launched five years ago at Stockton, Eng., and is built of iron and steel. She can carry one million gallons of water.

Three grandsons of the late Admiral Semmes, commander of the famous Confederate cruiser Alabama, are now in the United States service. One is a cadet in Sampson's fleet, another is a major in the Fourth Tennessee Volunteers, and the third is a sergeant in the First Tennessee Volunteers. They are the sons of L. E. Wright, who married the admiral's daughter and was himself an artillery officer in the Confederate army.

An American vessel lying at Naples was visited by the king and his suite. One of the latter, with cocked hat, mustache, sword, etc., was exploring the ship and mistook the main hatch wind-sail for a mast and leaned against it. The officer of the deck was promptly advised of the accident by the boatswain's mate, who said: "Excuse me, sir, but I think one of them 'ere kings has fell down the main hatch, sir"—"On a Man-of-War."

Of the 2,986 vessels which passed through the Suez canal last year, 2,837 employed the electric light for navigation during the night. As a result of this increased use of electric light, the mean duration of passage for all vessels passing through the canal shows a constant and satisfactory decrease. Last year the average duration was only 17 hours and 44 minutes, against 18 hours and 38 minutes in the previous year; and in 1897 the percentage of vessel navigating by night was 95 per cent., against 94 per cent., in 1896.

There is considerable towing to be done in landing supplies, handling transports and other work that the navy is now engaged in. The Navy Department would do well to profit by the experience lesson taught on the Great Lakes and utilize a group of the Shaw & Spiegle automatic steam towing machines, so many of which are now being turned out by the American Ship Windlass Co., Providence, R. I. It is possible that a number of sizes of these excellent machines are kept on hand ready for immediate shipment, but of this we are not aware.

The degree of completion of vessels under construction for the United States Navy, as shown by the records at the Navy Department on July 1, is as follows: Battleships—Kearsarge, 61 per cent.; Kentucky, 61 per cent.; Illinois, 48 per cent.; Alabama, 60 per cent.; Wisconsin, 40 per cent. Torpedo Boats—Rowan, 99 per cent.; Dahlgren, 80 per cent.; T. A. M. Craven, 60 per cent.; Farragut, 88 per cent.; Davis, 94 per cent.; Fox, 88 per cent.; Mackenzie, 99 per cent.; Stringham, 35 per cent.; Goldsborough, 10 per cent.; Bailey, 2½ per cent. Submarine Torpedo Boat.—Plunger, 73 per cent. Tug No. 6, 20 per cent.

The Engineering Magazine believes the expensive amusement of yachting has proved of great value to the government in this war. Aside from providing the government with swift boats for scouting purposes, some of the yachts carry guns which make them effective against little torpedo craft, as was demonstrated by the Gloucester at Santiago. The aroused pride of the nation in its navy will keep it at the front in formidable and effective fighting machines, but if rich yachtsmen can be induced to build their racers with reference to employment in time of war, the government will always have the fleetest small craft to purchase or impress for important service.

The Atlantic Transport Line, which recently sold seven of its steamships to the United States government for the sum of \$4,000,000, has just completed the purchase of the steamers Alexandria, Victoria, Winnifreda, Cleopatra and Boadicea from the Wilson & Furness-Leyland Line. Early next year four new steamships now building for the Transport Line will be ready for delivery. These vessels will be the largest freight steamers afloat and will have accommodations for 250 first-class passengers, 15,000 tons of general cargo and 1,500 cattle. The guaranteed speed will be twenty knots. They are to be 600 feet long and are now partially constructed at Harlan & Wolff's shipyard, Belfast, Ireland.

The Marinette Eagle says: "The N. Ludington Co. had at the dock last week the smallest lumber craft that has been loaded here in years, and it was manned by a crew just as small. It was the schooner Little Frank, which was all its name implied. The amount of lumber taken aboard was 6,000 feet and it was consigned to Algoma. The captain of the Little Frank is Charles Weber, aged 16; the first mate is his brother, 12 years old; and the steward is another brother, 9 years of age. They constitute the entire crew and manage to navigate their little craft in safety. They are the sons of a Marinette man, a former employe of the Marinette Iron Works. The Little Frank is probably the tiniest lumber carrier in both size and crew on the lakes."

The French liner Burgogne had a collision with a British ship of 1,500 tons register off Sable Island in the Atlantic ocean, 565 of her passengers and crew were lost. It will be in order now for some temperance orator to tell that whiskey kills more than the limpid fluid. Around Sable Island is the graveyard of the Atlantic ocean. All other graveyards show some distinction between the rich and the poor, but in this cemetery the king, clown and terrible Turk are all alike. The same sea rolls over all, the same storm beats, the same sun shines, while the minstrels of the ocean chant the same requiem to their honor all alike, while their bodies are being melted up for other forms of life, and their spirits take up their abodes in the summer land as the poets have sung, "there is no death, but spirit birth."—Port Huron Herald.

PURCHASE OF AN AMERICAN YACHT.

A. J. Drexel has sold his yacht, the Margarita, the ostensible purchasers being Messrs. Williamson and Johnson, of London, but the yacht was bought for the King of the Belgians, who personally inspected the boat, and all trials were carried on under the direct supervision of the Belgian minister of marine.

The Margarita will be known as the Alberta in the future. The price paid was \$350,000. Mr. Drexel intends building a new vessel to replace the Margarita, of somewhat larger dimensions and greater speed, which will no doubt be an excellent contract for the shipyard that secures the work, as increased speed and dimensions means a larger outlay.

CLAIMS AGAINST THE FRITZ.

A claim amounting to \$1,061.45 has been filed by N. S. Wood and C. H. Gage, attorneys for the General Electric Company of New York, against the steel steamer John Fritz, approaching completion for the Bessemer Steamship Company at the Wheeler yards. The electric company claims to have furnished considerable material for the three boats, but a portion of their bill is for interest. Other claims have also been lodged against the boat, but these will not be allowed to detain the completion of the vessel in any way as the Bessemer Steamship Co. will in all probability furnish bonds and make an equitable settlement or vigorously contest all suits which can not be disposed of in an amicable manner.

THE IRON ORE TRADE.

Observers of the iron ore situation say that it will not be surprising if the output of the Lake Superior region this year should amount to 15,000,000 tons. The increase thus far over 1897 in the matter of output is so large as to lead to that belief. It is at least certain that the increase will be vastly in excess of 14,000,000 tons.

The Cleveland association of ore sales agents has received reports from all shipping docks to July 1, and in the aggregate the ore output is found to have been 4,612,193 tons as compared with 3,150,289 tons for the same period last year. Even if there should be no further gain the 1,500,000 tons in round numbers that has already been gained insures an output of 14,000,000 tons as compared with 12,500,000 tons in 1897.

The principal gain in shipments of ore in the Lake Superior region has been at Ashland, though Gladstone, Marquette, Two Harbors and Escanaba have shared in it. The shipments from Ashland have been more than 500,000 tons in excess of what they were a year ago on July 1.

Factors contributing to the increased movement of ore this season are said to be larger vessels, deeper water than a few years ago, and a light grain trade.

The principal factor, however, is supposed to have been the early opening of navigation. A large part of the gain in ore shipments is found in the shipments to Chicago.

SUNKEN WRECKS ON LAKE ERIE.

The success attending the salvage operations at the wreck of the Idaho has doubtless stimulated other parties, interested in sunken steamers, to action. On Saturday last, diver A. R. Weston went down and examined a wreck located about four miles from Dunkirk.

The wreck was believed to be that of the Dean Richmond, which foundered on October 14, 1893, the master, Capt. George Stoddard, and crew of fifteen men of the Richmond, going down with the steamer.

The Richmond's cargo was a valuable one, and the hope of a rich salvage has prompted various parties to spend considerable time and some money in attempts to definitely locate the sunken hull.

Weston was engaged to make a descent last week to a wreck which had been found in eighty feet of water, at a point believed to be near the spot where the Richmond foundered. His employers were doomed to disappointment, however. The descent was successfully accomplished, but the report brought to the surface by the diver proves conclusively that the Richmond's hull has not yet been located. The wreck visited by Weston is that of a boat with arches, and, although the hull is in a good state of preservation, there is no cargo.

Those well posted on lake matters believe it to be the wreck of the Passaic, lost a good many years ago. The description of the submerged hull corresponds exactly, and it is known that the Passaic carried a load of lumber. This would have floated off, and accounts for the sunken vessel being without cargo. Much doubt is expressed that the Richmond's hull, even if not broken up, will ever be found.

NOTES.

THE Chicago Naval Reserves, who were enlisted instead of the Ohio Reserves, took part in the glorious naval battle of Santiago, and come in for their share of the prize money. Moreover, they were highly complimented by Commodore Schley for their efficiency and bravery.

THE London Chronicle says that Admiral Camara is English on his mother's side, for his father, who was a marine captain, married a Miss Livermore in Liverpool. He, like his comrade, Admiral Cervera, was graduated from the Naval academy at San Fernando, which he entered in the very year that the latter was leaving—1851.

It is now beginning to dawn upon the minds of some people interested in lake traffic that the early opening of navigation is in a measure accountable for the slackness of charters in July. Let everyone determine, that from August on to the end of the season, commercial activity, including transportation by water, will improve and boom, and without doubt it will meet their expectations.

If there is any one thing that this war has proved up to the handle, says the New York Journal, it is that our navy is clear fighting grit all the way through. Never once, has it failed under any test. Not an officer or a man has flinched from any danger, but many have wept because others were sent to face death without them. Dewey daring the torpedoes at Manila, Bagley dead in the attempt to do a battleship's work with a little eggshell of a torpedo boat at Cardenas, and Hobson throwing his life like an old coat into the channel at Santiago were merely types of our naval service. Every man in the fleet wanted to go with Hobson.

In the winter of 1895-6 a bill was introduced into Congress to provide for an investigation as to whether "it is practicable to control the waters of the Great Lakes and maintain them at substantially a uniform level and at all seasons of the year by dams placed at the outlets of Lakes Erie, St. Clair, Huron and Superior." The bill did not become a law, but the importance of the subject is shown in a paper read before the Society of Civil Engineers at their June meeting by Capt. Hiram N. Chittenden, C. E., U. S. A. The paper, which is a very interesting and valuable one, is entitled "Reservoir System of the Great Lakes of the St. Lawrence Basin; Its Relation to the Problem of Improving the Navigation of These Bodies of Water and of Their Connecting Channels."

WHAT TWO FLAGS REPRESENT.

England's national flag has been called "a triplet of crosses," for it is composed of the cross of St. George, the cross of St. Andrew and the cross of St. Patrick. Thus: The flag of "St. George of merrie England," a red cross on a white ground, the red lines drawn straight from top to bottom and from side to side; the flag of St. Andrew for Scotland, a white cross on a blue ground, the flag of St. Patrick for Ireland, a red cross on a white ground, the narrow red lines drawn from corner to corner. By placing the cross of St. George on that of St. Andrew we have "the Jack," as ordered in 1606 by James I., whose signature was always "Jacques," hence the expression, "the Jack." By laying the cross of St. Patrick over that of St. Andrew and then placing that of St. George over both, we have "the Union Jack," as borne since the union with Ireland in 1800. An eloquent Canadian writer finds that the American flag and the English flag wave together with singular beauty and harmony, "the one proclaiming the starry heavens, symbolical of God's infinite power—the other emblematical of his greatest work, the redemption of mankind."—Ex.

DETROIT MARINE POST OFFICE.

LETTERS REMAINING ADVERTISED IN DETROIT, MICH., POST OFFICE JULY 22, 1898.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Carter Wm., Sch. Verona	Loughway Octave
Campbell Mrs. R., Sch. Cleveland	Lembke August
Cameron Thos. P., Str. Bessemer	Mead Capt. Wm. Sch. Kimball
Desott Frank	Mordon J. E.
Deenes Perry, Str. Kelton	McVoy James, Sch. Bulgaria
Djuhuns Thomas	Niendorf Miss, Str. Pasadena
French Arthur	Pool John, 3, Brge. Amazon
Gould Charles	Provot Frank, Sch. Andrew
Hemenger F. R.	Russell W. B., Str. Corona
Hanson Hans, Sch. A. P. Grover	Roschmann Henry
Hendriksen Otto, Str. Tice	Rathbun Capt. E.
Herbin Frank	Skaate Andy, Str. Bulgaria
	Starkey Mrs. Eva
	F. B. DICKERSON, P. M.

A NEW CLEVELAND DOCK AND WAREHOUSE.

(ILLUSTRATED)

With the widening, dredging and improvements now being carried out by the municipality at Cleveland, private interests are also contributing to the facilities and conveniences of the port, and none more markedly so than the C. T. & V. R. R. Co., and the B. & O. R. R. Co.

Through the courtesy of Mr. J. E. Galbraith, traffic manager, we are furnished the views herewith of the new lake dock and warehouse of these companies.

The opening of this new and commodious dock and freight warehouse, fronting on the main river, and situated on West River street, between Main street and the Superior street viaduct, furnishes lake shippers unequal facilities for handling their business through Cleveland. Heretofore all traffic interchanged by the C. T. V. and B. & O. R. R.'s with the lake lines was transferred by teams, a feature which will now be dispensed with, the lake steamers going direct to the dock.

The new warehouse is a model in every respect, and is

successfully carried out the extensive improvements now rendered available to the commerce of the port of Cleveland, and which we are very pleased to learn are already duly appreciated by shippers as well as carriers.

PINTSCH LIGHTS AT DULUTH.

A few days ago Mr. St. John, of Atlanta, Ga., reached the head of the lakes and began an inspection of Duluth harbor with a view of introducing the Pintsch gas buoys and beacons, an improved system of marine lighting. Mr. St. John met Capt. Alexander McDougall in Washington last winter, and the matter of harbor lighting was pretty thoroughly discussed between the two men and resulted in the promise of Mr. St. John to visit Duluth at the close of the Congressional session.

The company that Mr. St. John represents has some forty of its lights on the Great Lakes. One of the advantages of the Pintsch light is that it burns continuously for any length of time desired, and the expense of operating one of the lights is but about \$15 a season. The light has been approv-

MANGANESE STEEL.

Manganese steel is substantially iron with 15 per cent. of manganese. It is manufactured in this country by the Taylor Iron & Steel Co., of High Bridge, N. J., sole licensees under Hadfields' patents, owned by the Hadfields, of Sheffield, Eng. It is so hard that it cannot be machined by the ordinary processes, and so tough that even the lightest castings will not break under the most severe shock. The first property is well illustrated by some tests made in the St. Francois county lead mines; the Central Lead Co. put a small casting of the metal under the drill press and wore the point off a Morse twist drill without cutting the steel, and at the Desloge lead mines, in an effort to dress down a small bushing of the steel, a man held it to a hard emery wheel for about ten minutes and managed to scratch it just once, says the Age of Steel.

The latter property was strikingly shown on two occasions in coal-mine accidents in Pennsylvania where the hoist broke, dropping the cage with the car, and both cage and car were completely demolished, with the exception of the



Showing Interior View of the New Warehouse and Freight Shed of the C. T. & V. R. R. Co. and B. & O. R. R. Co., Cuyahoga River, Cleveland.

without doubt the largest, most convenient and completely equipped in Cleveland, being especially arranged for the expeditious handling of lake freight. The dimensions of the steel superstructure are 500 feet long by 50 feet wide, the sides and roof being of steel sheeting. The interior is equipped with ways and traveling cranes for the quick and easy handling of heavy freight through the building, and to and from the dock and street sides. Twenty-five loading ways and doors on the dock and street amply facilitates the handling of freight. The river at the dock side has been dredged to a depth of 19 feet, which insures the safe handling of any boats making Cleveland harbor and using these splendid docks and freight sheds.

The several passenger and freight lines sailing regularly out of Cleveland will find their traffic business greatly facilitated and the handling of cargo made less expensive through the excellent modern accommodation now furnished by the C. T. & V. R. R. Co. and the B. & O. R. R. Co., and much credit is due the projectors as well as those who

ed by nearly all European powers, and the entire Suez canal is equipped with the system. The gas is made from a crude oil and does not weaken under compression. Over 100 buoys on the Atlantic and Gulf coasts are using this light, and the Light-House Board finds them completely satisfactory.

Mr. St. John will also look over the pier-heads in the harbor with the same object in view as in the bay. At the suggestion of the Light-House Board, Mr. St. John's company recently invented a system of combined light and bell buoys, using the gas for striking and using it again through the burners, without loss of any kind. The idea is thoroughly automatic and is regarded as one of the brightest inventions known in the world, and of the greatest importance to navigation and commerce.

It is reported that the Bertram Engine Works Co., Toronto, have been awarded the contract by the Richelieu and Ontario Navigation Co., to build another steamer in all respects similar to the Toronto, which was launched by them a few days ago. She is to be ready for next year's service.

wheels, which were of manganese steel and were uninjured.

The principal uses have been for projectiles for the heavy guns in the navy, and for mine car wheels, gears, pinions, sprockets and for wearing parts for granite and ore crushers, in which latter service it wears from five to ten times as long as the best chilled iron or ordinary steel. The United States ordnance department has recently adopted it exclusively for gun carriage shields in place of nickel steel, and it is now used largely for burglar-proof safes, having been proved to be both drill and explosive proof.

We have received a postal card this week from Port Burwell signed W. Backhome, stating as follows: "The body of a man about 5 feet 8 inches in height was found floating near the Long Point cut light (Lake Erie), had on cotton undershirt and hose, strong lace boots of good quality, minus two teeth in upper jaw, features unrecognizable, no hair on head or face." The body was duly buried.

LLOYD'S NEWS BELL.

No hamlet of apprehensive villagers was ever more alert to the clanging from its belfry than are the members of Lloyds' today to the solemn notes of the bell which dominates the world-renowned institution, and which has survived from the enterprise of Edward Lloyd, the coffee-house keeper, who first supplied his customers with news of the movements of vessels at home and abroad. The bell is mounted on a beautiful wrought iron stand, and overhangs a clock which crowns the screen at the end of the hall where the members congregate.

It is the old ship's bell of the Lutine, thirty-two guns, which, on October 6, 1799, was in Yarmouth Roads, ready to sail with a large amount of specie belonging for the most part to English merchants and bankers. The frigate sailed that night for Cuxhaven to act as convoy to the Baltic merchantmen. The following night, in a N. N. W. gale, she struck out on the outland bank of the Island of Vlieland, near the mouth of the Zuyder Zee, and sank. The only survivor was an old notary, who had been taken out by the representatives of the banking house who were in charge of

relief from the tension by vociferous cheering on the slightest pretext. The back of the screen, which shuts off a smaller room, is white with messages from the fifteen hundred agents of Lloyd's and is now swarmed around by anxious readers from the opening to the closing of business. As a matter of fact, though, there is no closing time at Lloyd's quarters, in the Royal Exchange, clerks being employed both night and day.—Ex.

SPANISH-AMERICAN WAR.

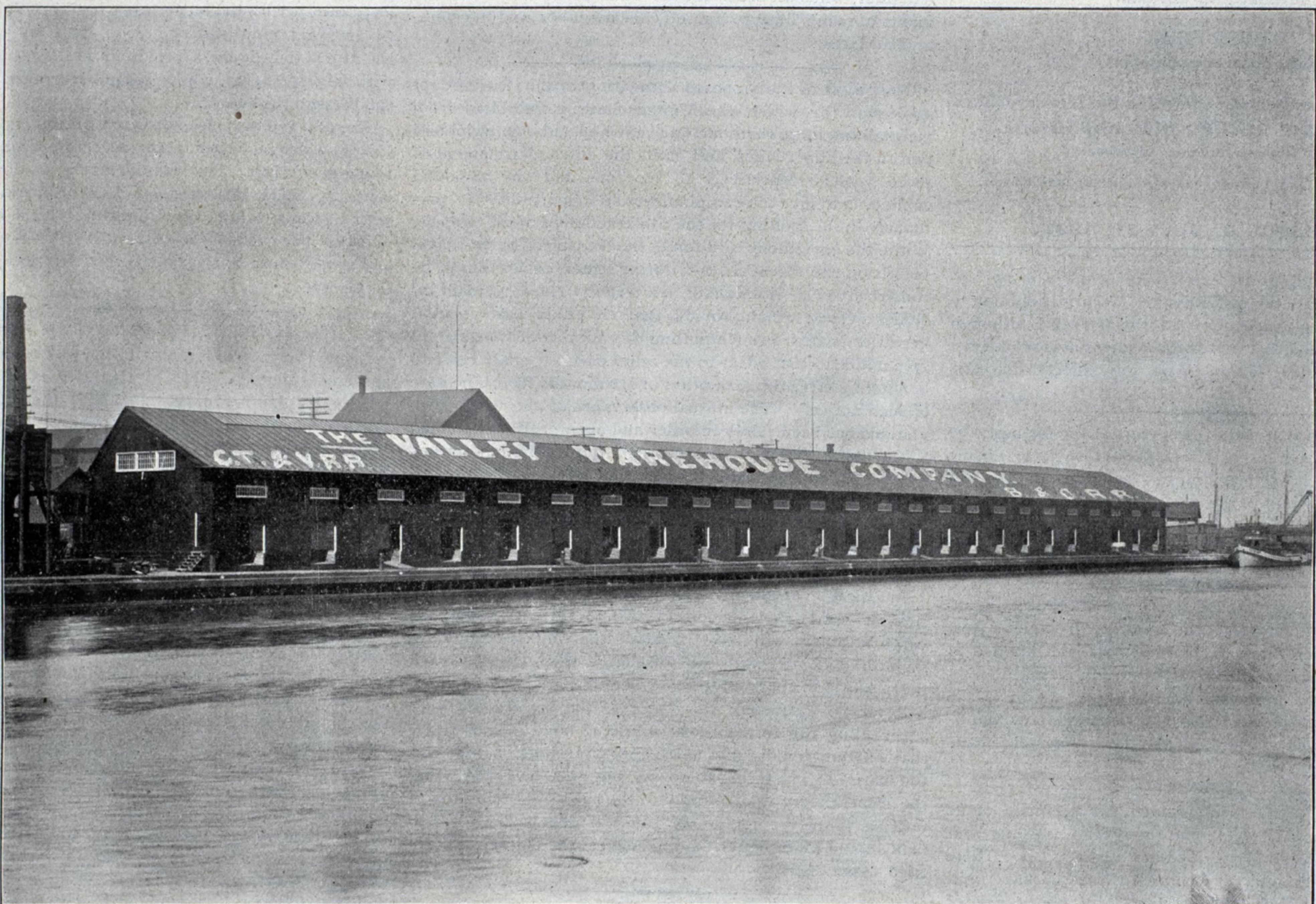
Beginning with May 1, or ten days after the war began, the American navy handled the navy of Spain with the following result to the enemy:

DESTROYED AT MANILA. Cruisers and gunboats—Reina Cristina, Castilla, Don Antonio de Ulloa, Isle de Luzon, Isle de Cuba, General Lezo, Marques del Duero, El Cano, Velasco, Isla de Mindanao (transport). One other ship not named.

DESTROYED AT SANTIAGO. Armored cruisers and torpedo boats—Viscaya, Christobal Colon, Oquendo, Maria Teresa, Furor, Pluton.

PNEUMATIC TOOLS.

The success attained by the Chicago Pneumatic Tool Company in the introduction of its air-operated tools in this country and in Europe is due, probably not less to the correctness of the mechanical principles upon which they are designed and the accuracy of workmanship with which they are finished, than to the business capacity of their commercial representatives. In most instances, notably in European workshops, it has been necessary to demonstrate with the tool itself in actual service the claims made for the superiority of its work over hand labor. That the tools could be depended upon at all times to substantiate these claims has been largely due to the care exercised in their design and manufacture, and for this part of the work credit is due to Mr. Joseph Boyer, who is the inventor of a number of the tools and in charge of the plant in which they are manufactured. Mr. Boyer's name first became well known to the railroad public in connection with the Boyer speed recorder, which was developed during the years from 1885 to 1889 inclusive, and which is the standard appliance for the purposes for which it was designed. The first pneu-



Showing Exterior View, Dock and River Frontage of the New C. T. & V. R. R. Co. and B. & O. R. R. Co.'s Warehouse and Freight Shed, Cleveland

the treasure to advise in the case of any question arising. At the time of the loss England was at war with Holland, and the Dutch Government consequently claimed the wreck and cargo as prize. During the years 1800 and 1801 various efforts resulted in the recovery of £55,000 worth of treasure and over forty years afterward another £50,000 worth of treasure was recovered. In 1886 some gold coins and several thousand silver dollars were finished up, and eleven years later more gold and silver were brought to the surface, these tokens being disposed of to members of Lloyd's as relics. The bell also found its way into the hands of the committee of Lloyd's as well as a piece of the tiller chain, which twines around the iron frame holding the bell, and some timbers, out of which a chairman's table and an armchair have been fashioned.

A crier stands in his box close to the bell, and by means of a wire tolls it whenever he has news of importance to announce regarding the movements of any vessel which has been underwritten at Lloyd's. At the present juncture, when the safe arrival of ships in port is a matter of anxious moment, the scene is a remarkable one. Members find

DESTROYED AT HAVANA. Cruiser—Alphonso XII.

At San Juan the torpedo boat Terror was disabled by the St. Paul, the cruiser Reina Mercedes, destined by the Spaniards to be sunk in Santiago channel, was sunk by the Texas before she could be brought to the desired spot, and several small craft have been disabled or captured.

Against this there has been no serious damage done to our ships, we believe. The disabling of a gun on the Baltimore is about the biggest accident that the Spanish navy has been guilty of.

GERMANY'S advance in shipbuilding may well be gauged from the following figures: From 1871 to 1880 the ten leading shipyards in Germany turned out work to the value of £325,000; from 1881 to 1890 the amount was £4,395,000; while during the period 1891 to 1896 the total value of the output had risen to £51,500,000. Taking the yearly average for the three periods the figures read £32,500, £439,500, and £8,500,000. German shipyards which, on June 5, 1882, gave employment to 23,000 men, had on June 14 of last year over 35,000 hands in their employ, or an increase of say, 59.6 per cent. in the number of persons employed.

matic hammer was invented between 1881 and 1883, but did not come into general knowledge and use until some time subsequently. Following the success attained by this hammer, improvements upon it and other air-operated tools followed in quick succession. The spring-return pneumatic hammer appeared in 1894, the style now known as the "old Boyer" in 1895, the "new Boyer" in 1896. The piston drill was perfected in 1896, and the riveter, which has been one of the most successful of compressed air tools, was brought out in 1897. Personally Mr. Boyer is as genial as a gentleman as he is skillful as a mechanic.—Railway Age.

Mr. Boyer is a St. Louisan, being the manager of the Boyer Machine Company, Twentieth and Wash Streets, St. Louis.

VESSELS CLASSED.

Vessels classed or rated by the American Shipmasters' Association in the "Record of American and Foreign Shipping" this week are as follows: American screw steamer, Carib ex-Kimon, owned by Wm. P. Clyde & Co.; American three-masted schooner, James C. Clifford; American half brig, John McDermott, and American ship, W. F. Babcock.



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It is now definitely settled that lake tonnage is not included in the charter tax war measure. A formal opinion to this effect is to be given by the Attorney-General, although it is well understood that no further uneasiness may exist regarding the clause, as it in no way affects domestic tonnage.

It is pointed out that within two years at the farthest, the canals of the St. Lawrence will be enlarged so as to enable them to pass vessels 255 feet long, 45 feet wide and 14 feet deep. This is the limit of the enlarged Welland canal. At present the canals of the St. Lawrence will pass vessels that do not exceed 185 feet in length, 38 feet in width and 9 feet in depth.

THE Parsons Marine Turbine Company, of Newcastle-on-Tyne, have been directed by the admiralty to build a torpedo-boat destroyer to test the turbine system as applied to warships. This new destroyer is to attain a speed of 35 knots, equal to over 40 statute miles an hour, which is 2.8 knots in excess of the new destroyer Express, now building. This destroyer will rank as the fastest vessel afloat, and will be named Viper.

THE Weather Bureau demonstrated the accuracy of its predictions again this week, and the special warning sent out on Tuesday was amply verified at all lake ports. There are some people around yet who are inclined to make light of the work of the service, but the majority are in favor of giving the weather probabilities full consideration and be guided thereby. Especially is this feature more marked in the fall of the year.

EVERY insurance company in issuing a policy puts the requisite stamp upon it without charge to the policy holder; every merchant drawing a check, places the requisite stamp upon it without charge to the creditor in whose favor it is drawn, and so on through the list, until the telegraph companies are reached, when they compel the sender of a message to pay the tax that should be borne by the company in exchange for the patronage offered.

THE new wharf and cargo shed illustrated in the current issue of the RECORD is the most convenient point for loading or discharging general cargoes that there is at Cleveland. Desiring to give credit where credit is due, it is but just to say that the railroads giving such excellent shipping facilities to the trade of Cleveland are fully entitled to the best consideration of general commercial interests, and the municipality, which has been so generously considered, ought at least to endeavor to reciprocate in some measure the advancement and enterprise exhibited by the management of the railroad lines in this instance.

A MISLEADING feature which has caused much letter writing, gush, if not considerable temporary annoyance and a lot of other trifling inexactitudes, is the idea that anyone shipping in the navy as a landsman or even ordinary seaman, must be asked to do nothing but strictly naval work, nor should any other employment be given him but that which pertains to the naval aspect of getting ready to fight. On second thought it may be conceived that carrying a sack of coal or trundling a wheelbarrow while fueling is one of the duties and only a portion of the labor involved in getting a steamer prepared to go into action, so is clearing up the decks, even if it amounts to many regular hours of swabbing and holy stoning and so on throughout the culinary, sanitary, and all other ordinary work performed on board of a naval vessel, be she a dispatch boat, transport or first-class battleship. Any and every job of work or class of duty required in the navy is done by the members thereof, nor has the day yet arrived when the assistant clerk to the deputy lamp trimmer's yeoman should take umbrage at not being requested to pace the poop with a telescope under his arm, or make any strenuous objections to being asked to waltz up to the gratings, there to interview the gunner's daughter, when all other means of teaching him the rudiments of man's duty to himself, his neighbor and his country had failed.

The object of the proposed abrogation of the Rush-Bagot agreement by which the United States is inhibited from maintaining more than one war vessel on Lake Ontario and two on the upper lakes, and limits the size and armament of these vessels respectively to 100 tons and one 18-pound cannon, is to give lake shipbuilders an opportunity to participate in the bidding for the construction of naval vessels. While the agreement is in force, the construction of naval vessels on the Great Lakes during emergencies might be construed as a violation of its terms. The agreement includes a clause which provides that "if either party should hereafter be desirous of annulling this stipulation and should give notice to that effect to the other party, it shall cease to be binding after the expiration of six months from the date of such notice." The mutual observance of the treaty stipulations has been justly in order and apparently redounded to the best interests of all concerned, but a different era has now set in, so that the terms of the agreement should be cancelled forthwith and the unequal, if not unjust discrimination against a number of the lake States and their industries be rendered void.

A Chicago vesselman is quoted as saying that the time is now at hand when owners of two to three thousand ton cargo steamers will have to adopt the schooner handling style of doing business and discharge their crews at each port, wait for a cargo until they get chartered and sail with little or no insurance; this, because the larger vessels are superseding the former great carriers. We always knew that anyone could run a newspaper or an hotel better than the man who was trying to do so, but was not aware that the same theory would apply to the successful handling of floating property, nor do we think it does. The Chicago man should know better than to suggest the efficacy of often tried experiences.

REPORTS from Chicago this week regarding the detention of steel steamers owing to the inability of men to stand the heat while discharging cargo, would suggest the advisability of producing an artificial draft or ventilation at a light cost. While the total inability to work may only be experienced for a few days each season there can be no doubt but that if a fresh current of air was sent circulating through the holds of these large floating metal warehouses, it would be found a great boon to labor and facilitate the working of cargo nearly all through the season, or at least for four months out of the eight.

A COMMERCIAL invention of decided practical convenience in its purpose and operation has been brought forward by Clark Chase, of Fall River, Mass.—an apparatus of simple construction, designed to unload coal or grain from vessels and convey it into bins in yard or shed or into other vessels. The bucket or scoop of the machine is worked upon a wire cable and can be moved at any angle, and among the advantages claimed for the arrangement prominence is given to the fact that it will raise coal 50 feet in the air, carry it 500 feet distant, then lower it to the surface and dump it without any breakage, this being, of course, a very important gain over the usual method. It will also take up

the same coal and carry it back into the vessel when desired, or load it into cars or teams, carrying it in any direction. It will likewise take coal from any bin in the shed and convey to a hopper, where it can be screened, thus saving all hand screening in the yard; and, in addition, is adapted for coaling ships from cargoes at sea or in harbor, and will take coal from piles at coal stations for deposit wherever desired.

IN our issue of June 23 we suggested that a number of freight steamers might take out a limited passenger license and thus augment their season earnings. It is now announced that the big steel freighter Centurion, which is under charter to Nye, Jenks & Co., and employed principally between Washburn and Buffalo, will carry a limited number of passengers during the season. The round trip rate has been fixed at * * * including meals and berth.

LAKE FREIGHTS.

There is a slight improvement noticeable in the lake freight market this week, and the feeling of a more promising outlook prevails among a number of vessel owners and brokers. The Chicago grain rate which has held so steady at $\frac{3}{4}$ cent per bushel on corn has been raised a fraction, and $\frac{7}{8}$ cent paid on at least one cargo, with an attempt to hold the rate at that figure. Toledo to Buffalo 1 cent on wheat with fair shipments, while Detroit has also sent forward a small cargo this week.

The coal rate has also advanced 5 cents per ton, Buffalo or Erie to Chicago, other ports 20 cents, with not too much tonnage offering. The iron ore rate is as formerly, viz., 40 cents, 45 cents, Escanaba and Lake Superior respectively, with a greater volume of shipments, and a consequent less effort to place vessels, so that while the rate remains low and steady, most of the vessels that will accept the rate can be placed.

TO REACH THE NORTH POLE.

Lieut. Peary, who is again on his way to the Arctic circle, announces that the object of this trip is to find the north pole. His plan is to push his vessel, the Windward, as far north as possible along the west coast of Greenland, and he hopes to reach Sherard Osborn fjord. When the sledging season of 1899 opens Lieut. Peary intends to make a journey to the extremity of the chain of islands which stretches toward the pole from the north coast of Greenland, and if the ice conditions are favorable he will make a start toward the pole itself. If the ice is too rough, he will postpone his contemplated journey north until the sledging season of 1900.

While Peary is thus working toward the pole from the north coast of Greenland, Walter Wellman will be trying to reach the pole by way of Franz Josef Land, and Capt. Sverdrup with the Fram will be pushing his way through the channels along the west coast of Greenland. The Fram's trip is not to try to find a way to the pole, but to delineate more of the vague coast line along the channels which separate Greenland from British Columbia. Wellman's project is the least promising of all, as it is now generally believed that there is no land between Franz Josef Land and the pole, thus, the Peary idea of using sledging facilities seems to be the most reasonable way of reaching a point situated in perpetual ice.

A FLOATING NAUTICAL ACADEMY.

J. G. Lamson, of Bay City, Mich., is looking for a good schooner which he proposes to use as the foundation for a marine academy. According to Mr Lamson's plans, the school will be opened in February, at Chicago. A combination of academic and nautical instruction will be followed. Forty-seven pupils will be cared for, by six instructors and two officers. The season will open in Chicago with examinations, and the early spring will be devoted to naval discipline and general study. By the time the schoolship goes into commission, in May, the pupils will have advanced well in practical navigation, and their theories will be put into shape by a cruise which will cover the Great Lakes. Strict discipline will be maintained throughout the voyage, and the pupils will not be allowed ashore except with instructors.

A charge of \$500 a year of ten months will be made. This will include everything except underclothing and laundry. Many applications it is stated have been received already and a successful initial season is looked for. Mr. Lamson is looking for a suitable schooner to purchase, but in case it is impossible to find such a vessel he will build according to his designs.

ST. MARY'S RIVER RULES AND REGULATIONS.

The following letter is sent from the U. S. Engineer Office, Detroit:

I enclose a copy of rules that have just been prescribed by the Secretary of War, for regulating navigation through the Middle Neebish channel, St. Mary's river, Mich.

Most vesselmen, but possibly not all, know that a part of this channel is an artificial cut through solid rock, and that the work of deepening it is now in progress. Operations have now reached such a stage that no more than half the original width (300 feet) of channel is available for navigation; this reduces the navigable width to 150 feet, and as the channel has steep rocky sides and a very swift current, vessels cannot now meet there without grave danger of collision, which would be likely to result in sinking one or more of them; the result would be to close navigation to and from Lake Superior for an indefinite period to all but such light draft vessels as could use the old river channel.

It has been found that the great majority of vessel masters will pay due heed to a single notice indicating what is required for safe navigation in cases like this, but there are quite a number of others who will pay no attention to anything but rules whose violation can be adequately punished.

The local conditions are now so critical that the establishment of such rules has become imperative in order to reach these exceptional cases.

These rules are now being printed for distribution, and some copies will be sent you as soon as completed with request that you cause them to be posted where they will do the most good in your locality. Very respectfully,

G. J. LYDECKER,

Lieut.-Colonel, Corps Engineers, U. S. A.

RULES AND REGULATIONS FOR THE NAVIGATION OF THE MIDDLE NEEBISH CHANNEL OF ST. MARY'S RIVER, MICH.

Under the provisions of Section 4, of the act of Congress approved August 17, 1894, the following rules and regulations are prescribed for navigating the 20-foot ship channel through the Middle Neebish, St. Mary's river, Mich., a public necessity requiring such action on account of work now in progress for deepening a critical section of said channel, viz: abreast of the north side dike, from a point about 1,500 feet above its lower or easterly end, to a point about 1,150 feet below its upper or westerly end. The width of channel that will be available through this section, while the work is in progress will not exceed 150 feet:

Rule 1. Vessels bound in opposite directions shall not meet in the Middle Neebish channel anywhere abreast of the dike, and masters or others in charge of vessels shall take every possible precaution to avoid so meeting.

2. Down-bound vessels shall have the right of way in all cases, and up-bound vessels shall reduce speed or stop, so as to remain in the wide channel-way below the dike while any down-bound craft is approaching or passing abreast of it. Waiting vessels shall take such position in the wide channel-way below as will leave the down-bound craft free to continue in prolongation of her straight course abreast of the dike.

Rule 3. The U. S. Engineer Officer in charge will arrange for having the navigable channel, abreast of the dike, so buoyed and lighted as to best conform with the changing conditions that will attend the progress of the work in that locality, and the movement of all vessels must be so directed that they shall not pass outside of the limits indicated by such buoys and lights.

Rule 4. The U. S. Engineer in charge of the work, and his local assistants, will regulate the movements of all vessels in the vicinity, to such extent as may be necessary to insure compliance with these rules. And all orders or instructions given by them with that object in view must be promptly obeyed.

The foregoing rules shall be of full force and effect immediately after their promulgation, and shall so continue until the work of deepening the channel becomes completed. The U. S. Engineer in charge of the work will arrange to have the locality closely watched, and all willful violations of the rules duly reported for prosecution as provided by the act of Congress hereinbefore referred to.

Approved: R. A. ALGER, Secretary of War.
War Department, Washington, D. C., July 14, 1898.

TO ABROGATE THE TREATY.

Don M. Dickinson, ex-Postmaster-General, at the request of several Congressmen and Senators, has forwarded to Washington a brief on the question of securing an abrogation of the treaty between England and the United States with regard to the number of war vessels to be permitted upon the Great Lakes. The brief is one that was prepared two and a half years ago, when the question was first brought to the attention of the Secretary of State, but at that time the Venezuelan boundary and other questions were in hot dispute between England and the United States, and it was an unpropitious time to push the matter.

Just now the shipbuilding interests of the Great Lakes are not too busy. The government, unquestionably, it is

believed, will soon increase its naval forces by thirty battleships and twenty armored cruisers, placing it second only to Great Britain as a power on the high seas. If the treaty with respect to war vessels on the Great Lakes could be abrogated, the lake shipbuilders could enter the field for the construction of some of these great vessels. There is not sufficient capacity in the ocean shipyards to handle the entire work.

The brief was prepared by Mr. Dickinson in the shipbuilders' interests, and now that the matter is again before the government for consideration, it is believed that he will be induced to take the matter up and argue it before the government, while the relations between United States and Great Britain are so friendly.

UNITED STATES NAVAL RULES.

A new compilation of United States laws relating to the navy, marine corps, etc., has just made its appearance, having been compiled by William H. Michael, late of the United States Navy by special direction of Congress. For twenty years the Navy Department has been getting along with an obsolete publication known as Hogg's Digest, supplemented by a mass of new statutes, comptrollers' decisions, supreme court decisions, etc. The present volume welds these together and prunes away a lot of repealed statutes and cancelled regulations and gives in compact form with careful annotation, a complete digest of naval law, as revealed not only in the statutes, but in the decisions of the courts and opinions of the attorneys-general.

THE CHARTER TAX.

Harvey D. Goulder, Esq., Counsel for the Lake Carriers' Association, received a telegram from Hon. T. E. Burton in which he says: "Internal revenue department has decided that vessels engaged in domestic commerce are exempt from charter tax, but await formal opinion of the Attorney-General before promulgating order." This may be taken as confirmation of the news received from Washington some days ago. In the brief presented by Mr. Goulder to the government officials, the point at issue was thus stated:

"I beg to call attention to the paragraph of the revenue law of June 13, 1898, relating to charter party and to ask a ruling whether the tax provided in that paragraph applies to enrolled tonnage engaged in the internal and coastwise domestic trade by lake, river and canal, or is confined as its language indicates, to registered tonnage as is known in our statutes and in the practice of the Treasury Department."

ELECTRIC LIGHTS IN HOLDS.

The recent damage to grain in the hold of the Canada-Atlantic line steamer German, resulting from fire occasioned by an incandescent electric lamp, led someone to suggest that the use of a moisture globe as a shield for the little incandescent bulb would obviate all danger of ignition. The suggestion led to a practical test by Chicago underwriters a few days since. A moisture globe was placed over an incandescent lamp and buried in a quantity of oats for a period of two hours. The result of the test must have been very unsatisfactory to the party who made the suggestion, for upon careful examination the oats were found to have been burned. It is now regarded as almost absolutely certain that the Inland Lloyds Board of Survey will enforce a rule against the use of stationary electric lights and wires in the holds and compartments of steamers or other vessels. While this action may not compel the removal of such fixed wires and lamps, it is calculated to make owners of vessels continuing their use responsible for damage to cargoes resulting from fire and smoke the origin of which can be traced to them.

FOR THE COAST TRADE.

A handsome little steamer is reported at Oshkosh, Wis., this week undergoing a final overhauling preparatory to being taken to the coast. She is named the Delaware, and is from a New London, Wisconsin, shipyard. She is owned by Wilson M. Vinyard & Son, and is designed for the fruit trade between Delaware points and Philadelphia. She will go through the St. Lawrence, the voyage from New London to Milford, Del., taking, it is estimated, about two weeks.

The Delaware is 120 feet over all, 18 feet beam and 6 feet draught. She is a twin-screw steamer and has an estimated speed of sixteen knots an hour. She is supplied with two large compound engines. Her cabin is finished in polished oak and she has sixteen staterooms finished in mahogany or accommodations for thirty-two passengers. She is also furnished with an electric light plant and carries a searchlight.

Many craft of this description, dimensions, etc., might be

built on the lakes and taken through the summer months via the St. Lawrence system of canals to the coast for special or coastwise service, and while quite a number of lake built vessels have reached salt water from time to time the industry has not been pushed to any great extent, and there yet may be a wide opening for lake shipbuilders and cognate interests and industries in this direction in the near future.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset by reversing the east bearings given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the Sun's setting:

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.		
Sunrise.	Bearing.	Bearing.
July 23.....	E. 27° N.	N. E. by E. $\frac{3}{4}$ E.
July 27.....	E. 26° N.	N. E. by E. $\frac{3}{4}$ E.
July 31.....	E. 25° N.	N. E. by E. $\frac{3}{4}$ E.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.		
Sunrise.	Bearing.	Bearing.
July 23.....	E. 28° N.	N. E. by E. $\frac{1}{2}$ E.
July 27.....	E. 27° N.	N. E. by E. $\frac{3}{4}$ E.
July 31.....	E. 26° N.	N. E. by E. $\frac{3}{4}$ E.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.		
Sunrise.	Bearing.	Bearing.
July 23.....	E. 29° N.	N. E. by E. $\frac{3}{4}$ E.
July 27.....	E. 28° N.	N. E. by E. $\frac{1}{2}$ E.
July 31.....	E. 26° N.	N. E. by E. $\frac{3}{4}$ E.

LAKE SUPERIOR, LAT. 48° N.		
Sunrise.	Bearing.	Bearing.
July 23.....	E. 31° N.	N. E. by E. $\frac{1}{4}$ E.
July 27.....	E. 29° N.	N. E. by E. $\frac{3}{4}$ E.
July 31.....	E. 28° N.	N. E. by E. $\frac{1}{2}$ E.

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied, will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

REVIVAL OF THE SHIPBUILDING INDUSTRY.

Under the above caption a contemporary very pertinently observes that the prospects for an enormous expansion of the American shipbuilding interests could not be brighter than at the present time.

The battles of Manila and Santiago have demonstrated that American-built ships are the best in the world. American armor plate has proven to be the highest grade made, and American guns have shown their effectiveness in an unmistakable manner.

Russia has already recognized this fact, and has placed large orders with the Cramps. Japan now has two cruisers building in American shipyards and is congratulating herself therefor.

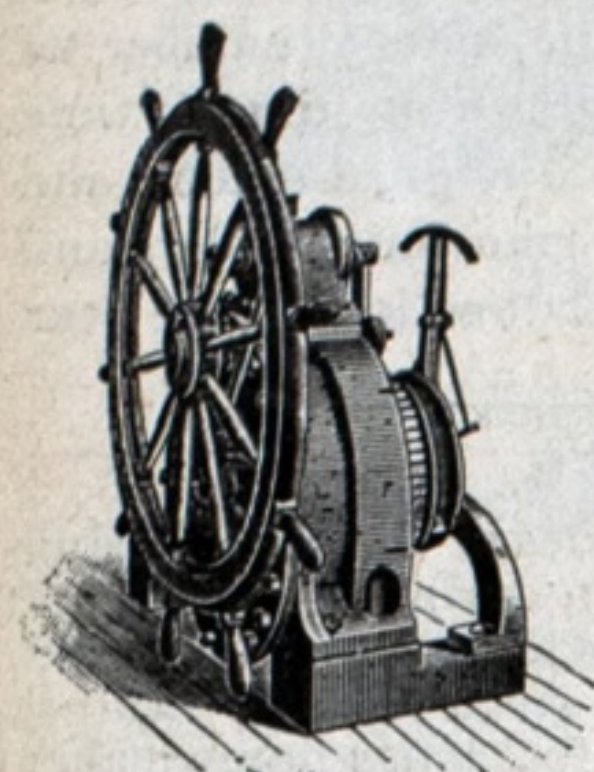
The demands which our own navy will make on our shipyards and foundries will be considerable. With Russia and Japan customers of American shipbuilders, the minor nations may be expected to follow their example when they go into the markets for war ships. And it may be expected that the construction of merchant ships will also take on larger proportions. What our shipbuilders are capable of doing in that line is shown by the splendid vessels—the St. Paul and St. Louis—of the American line, built in this country and now serving as auxiliary cruisers.

There is good reason to believe, in fact it is apparent, that the shipbuilding industry of this country will soon assume the importance it had in the days before iron and steel replaced wood in naval construction. It is inevitable that our own demands will give this industry a great impetus, but should other countries come here for their ships, as now seems probable, it will assume great proportions.

It is only a question of a short time when the United States becomes the undisputed leader in the industries in which iron and steel are the main factors. Our natural resources and manufacturing genius make it inevitable.

A NAVAL floating machine shop is among one of the new annexes of the United States Navy. It is to be fitted up with all appliances and tools necessary for the electricians and machinists who as enlisted men will be at the service of the Government. It will be in close contiguity to such squadrons or fleets as may need its services. In these days of marine machinery, when every battleship or cruiser, gunboat or collier, is an assemblage of mechanical appliances, the advantages of a floating repair shop cannot well be over-rated.

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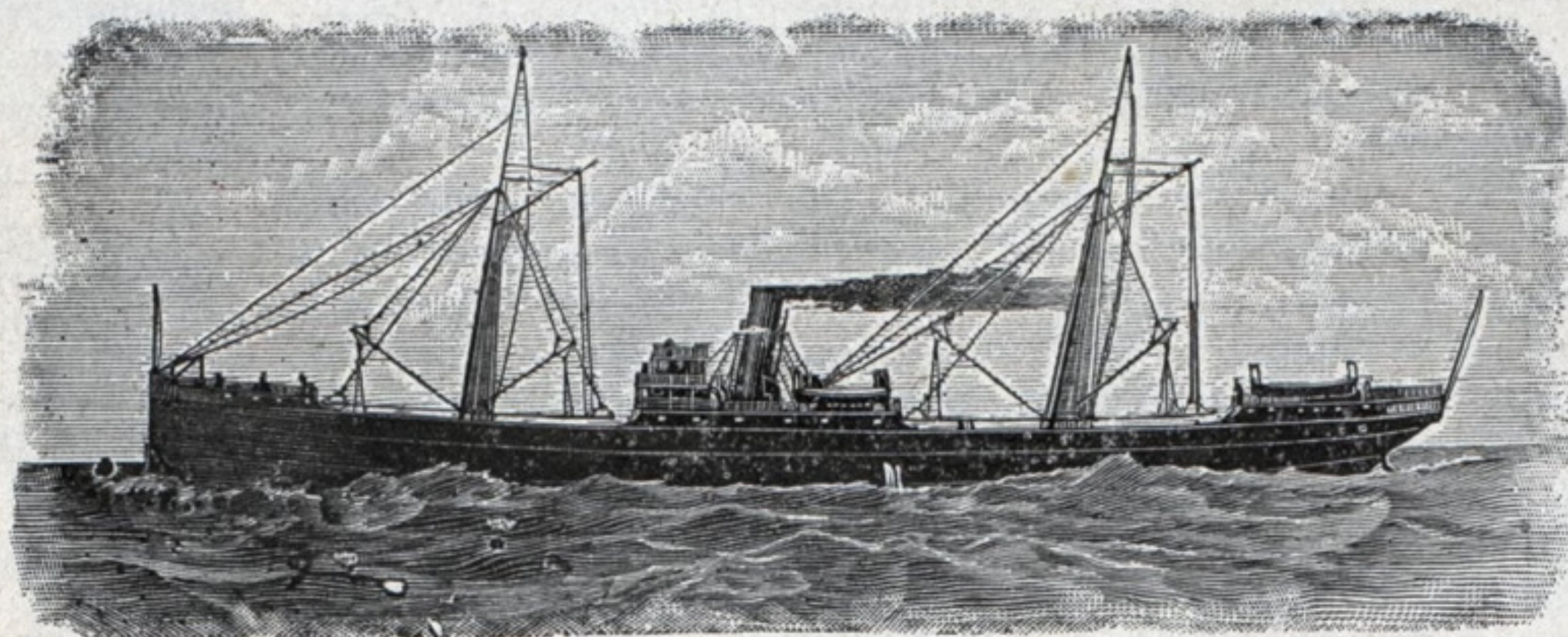
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TREASURY DECISIONS RELATING TO MARINE INTERESTS.

TITUSVILLE, PA., A PORT OF DELIVERY

TREASURY DEPARTMENT, July 9, 1898.

To collectors and other officers of the customs:

The appended act of Congress, approved July 2, 1898, designating Titusville, Pa., a port of delivery in the customs collection district of Erie, Pa., is published for the information of all concerned.

W. B. HOWELL, Assistant Secretary.

GLADSTONE, MICH., A SUBPORT OF ENTRY.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
WASHINGTON, D. C. July 6, 1898.

To officers of the customs and others concerned:

The appended act of Congress, approved on the 29th ultimo, is published for your information and guidance.

W. B. HOWELL, Assistant Secretary.

SCHEDULE A—CHARTER PARTY.

Barges not included in the term "vessel," in paragraph relating to charter party.

TREASURY DEPARTMENT,
OFFICE OF COMMISSIONER OF INTERNAL REVENUE,
WASHINGTON, D. C., July 7, 1898.

Sir: In reply to your inquiry of the 30th ultimo, you are hereby advised that, in the provisions of schedule A of the act of June 13, 1898, under the head of "charter party," the word "vessel," as there used, is held by this office not to include barges, which, under the laws of the United States, are not registered, but are merely licensed.

Respectfully yours,

N. B. SCOTT, Commissioner.

Mr. A. C. Stevens New York, N. Y.

STAMP TAX—SCHEDULE A MARINE INSURANCE.

The affixing to the books of the underwriters of the stamps representing the tax on premiums charged on certain marine insurance policies authorized.

TREASURY DEPARTMENT,
OFFICE OF COMMISSIONER OF INTERNAL REVENUE,
WASHINGTON, D. C., June 30, 1898.

To all Collectors:

Under the war revenue law (Schedule A), paragraph entitled "Insurance" (inland, marine, fire, p. 15), the tax on marine insurance is to be paid by a stamp representing one-half of 1 cent on each dollar or fractional part thereof upon the amount of premium charged. It appearing to the satisfaction of this office that from the nature of the marine insurance business it is only possible to ascertain the amount of the premiums charged under open policies from the books

of the underwriters, and as they have filed a satisfactory bond, you are authorized to accept the affixing of stamps to said books, and their due cancellation as full compliance with the law, provided that the stamps are affixed monthly and the figures are sworn to by the president and secretary or the recognized attorneys or agents of the marine insurance corporation or association paying the tax.

You will also, on the first day of each month, or within ten days thereafter, require a return in duplicate on a form to be prescribed by this office from each of such underwriters showing the amount of premiums received under open policies during the preceding month, the first return to be made on the 1st day of August, 1898, or within ten days thereafter, to include all premiums charged during the month of July, 1898.

N. B. SCOTT, Commissioner.

AN ACT TO DESIGNATE GLADSTONE, MICH., A SUBPORT OF ENTRY.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that Gladstone, in the state of Michigan, be, and the same hereby is, designated a subport of entry in the customs collection district of Superior, and that the privileges of immediate transportation of dutiable merchandise without appraisement, as defined by the act of June 10th, 1880, entitled, "an act to amend the statutes in relation to the immediate transportation of dutiable goods, and for other purposes," be, and the same are hereby extended to said subport.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo	406,000	1,136,000	825,000	55,000	250,000
Chicago	375,000	8,062,000	467,000	47,000	10,000
Detroit	20,000	119,000	.....	9,000	.....
Duluth and Superior	2,259,000	2,501,000	30,000	10,000	40,000
Milwaukee	104,000	.....	.....	2,000	10,000
Montreal	96,000	139,000	1,087,000	13,000	28,000
Oswego .....	.....	.....	.....	.....	.....
Toledo	156,000	466,000	54,000	10,000	.....
Toronto	19,000	.....	12,000	.....	.....
On Canal	25,000	482,000	728,000	126,000	20,000
Grand Total	10,461,000	19,987,000	5,572,000	460,000	385,000
Corresponding Date, 1897	15,324,000	15,130,000	7,003,000	2,048,000	1,008,000
Increase .....	.....	.....	.....	.....	11,000
Decrease	2,055,000	2,868,000	368,000	418,000	.....

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

BOTH WERE NEGLIGENT.

Judge Lochren has rendered his decision in the case involving the collision of the tugs Pathfinder and the Medina September 1, 1895, in Duluth harbor. B. B. Inman as owner of the Pathfinder brought suit against the Medina for damages, alleging negligence. The findings of Judge Lochren are as follows:

"As the masters of both tugs were negligent and in fault, and the negligence of each contributed to the disaster, the damages should be divided. No demurrage can be allowed (Spencer on marine collisions, section 204, note on page 375). The upper works and deck houses, as well as the machinery and furniture of said tug Pathfinder, were either wholly or partially destroyed, or sustained serious injury as the result of said collision and sinking, and the necessary cost of raising the tug and of repairing the same and its machinery, and of repairing and replacing its furniture, amounted to the sum of \$2,400, and the libellant sustained damages in that sum from said collision and is entitled to a decree in his favor in this suit for one-half of the amount of the damages, namely the sum of \$1,200 and interest thereon at 6 per cent. per annum since the date of the filing of libel in this suit."

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., report the eastern freight market as follows:

Some improvement has recently taken place in the demand for grain tonnage for August loading, several fixtures having been made for that period. Prompt steamers are very hard to dispose of for grain, as no new business appears offering; the charters effected were to cover old trades. Berth freights, equally dull for July, have advanced for August and later months' loading to fair average figure, and the regular lines have covered a considerable part of their forward room under these conditions. Some enquiry continues for deals from the Provinces, as open vessels are not pressing on that market at the reduced freights now offering. Timber freights from the Gulf are quiet at the moment, shippers having now pretty liberally provided for their wants, but the range of freights established continues to be well maintained. A couple of boats have been fixed for phosphate, otherwise the general demand for steamers is not active, and open prompt boats experience some difficulty in finding satisfactory employment.

Business in sailing vessels has been slow during the past week, but rates are apparently firm, and we have nothing of special interest to report in this line.

The Duluth, Missabe and Northern railroad is building a new bridge over the upper crossing of the St. Louis river. The plate girder is probably one of the heaviest in America, the plates being 114 inches high with flanges 18 inches wide. The girders are 100.5 feet long and weigh each 200,000 pounds. The Missabe road is also putting in foundations for a double track.

MARITIME LAW.

THE LYDIA A. HARVEY.

TARR V. THE LYDIA A. HARVEY.

District Court, D. Massachusetts, February 10, 1898.

MARINE INSURANCE—SALVAGE BY INSURER.—A vessel was stranded on the beach, so that the tide ebbed and flowed through her, and was deserted by her master and crew. Her owner informed the insurer that he was unable to meet the expense of getting her off, and the insurer employed another to raise and float her, replace her ballast, and tow her to port for \$350. The work was performed, the sum paid, and the insurer took an assignment of the salvage claim. Held, that the insurer did not act as a voluntary adventurer, but in its own interest, because of the insurance contract, and that it had no claim on the proceeds of her sale.

MARITIME LIENS—RESIDUE OF PROCEEDS NON-LIEN CLAIMS.—As against the owner petitioning for payment of the residue of proceeds to him, the court cannot distribute the same in payment of claims and maritime liens.

This was a libel in rem by James G. Tarr against the schooner Lydia A. Harvey. The cause was heard on a question as to the distribution of funds in the registry, resulting from the sale of the schooner.

Brown, District Judge. This case presents questions of the validity of claims to funds in the register resulting from a sale of the Lydia A. Harvey. The China Mutual Insurance Co., as assignee, claims a first lien for salvage. December 16, 1896, the Harvey was stranded on Plymouth Beach, off the town of Plymouth, in this district, in a place where, though sheltered and on a soft bed of sand, she was exposed to possible danger of injury from ice. The tide ebbed and flowed through her, and she was deserted by master and crew. Her owner forthwith informed the insurance company (insurer to the amount of \$800 on the vessel and \$200 on outfits and catch on a valuation of the vessel at \$2,000) that he would not get her off as he was unable to meet the expense. The insurance company employed Sorrensen, a submarine diver and raiser of sunken vessels, to float her, replace her ballast, pick up her anchor, and tow her to Boston, agreeing to pay \$350 for the work when performed. The work was done. Sorrensen was paid by the company, and made in writing an assignment of his claim and lien. The company also paid to other persons for a survey, for services, and for caulking, additional sums, amounting to \$95.42.

I am of the opinion, that the insurance company has failed to establish any legal or equitable right to compensation from the fund in the registry. Though there was, probably, no proper abandonment or right to abandon, the company nevertheless interposed for its own interest, and upon the evidence must be regarded as the principal, who, through its employee, and at its own expense, got the vessel off, and brought her to Boston. It acted not as a voluntary adventurer, but because of its previous contract with the owner, which made it directly interested in the preservation of the vessel. The company was liable, under its policy, for a partial loss. The contention that the loss did not amount to 14 per cent. of the valuation, is based upon a deduction of 1/3 "new for old," which is not permissible in the present case. Potter v. Insurance Co. 3 Sumn. 27, 45, Fed. Cas. No. 11,335; Wallace v. Insurance Co. 22 Fed. 66, 70. Within the limit of the amount insured, its expenses cannot be regarded as incurred for the benefit of all, but must be considered as incurred solely for its own benefit. Providence & S. S. Co. v. Phoenix Insurance Co. 89 N. Y. 559, 563; The Clarita and The Clara, 23 Wall. 1, 17. The company must therefore stand upon its own rights resulting from its own acts, and cannot increase or alter them by taking an assignment from its own employees, who did not rely upon the credit of the vessel, and who have been paid. It would certainly lead to great confusion if underwriters who are liable for a loss by stranding should be permitted to get the vessel off, acquire a salvage lien, completely reimburse themselves from the vessel, and compel the assured to sue to recover from them the amount, or a portion of the amount, that the underwriters have received from the vessel.

I find it unnecessary to decide whether the company has paid out anything in excess of the amount of its liability, since, if it has done so, it has only a claim upon the owner, and none upon the fund.

The non-lien claims. I think it clear that against the objection of the owner, who petitions for the payment to him of any residue after satisfying the claims secured by maritime liens, the court has no power to distribute the proceeds in payment of claims not maritime liens. The Lottawanna, 20 Wall. 201, 219, 224; The Willamette Valley, 76 Fed. 838,

841, 844. There will be allowed, in addition to the lien claims of James G. Tarr and Sidney W. Oakes, for which decrees have been entered, the lien claim of Geo. W. Smith, which, after correction of error, amounts to \$66.43; also the lien claims of Timothy B. Sprague and J. S. & J. H. Marquand. After satisfaction of the above claims, with interest and costs, the residue, after deducting therefrom the amount of \$231.91, will be payable to John Clancy, the owner. The sum of \$231.91 may, by the consent of Clancy, be paid to the proctor for J. Baker & Co., J. G. Tarr & Bro., and Sidney W. Oakes. The remaining claims are disallowed. A decree may be entered in accordance with this opinion.

It is claimed that the Red Jacket shaft of the Calumet and Hecla copper mine, in Michigan, is the deepest mine-shaft in the world. It has taken nine years of day and night work to sink, and has cost \$2,500,000. This shaft is vertical but all the other shafts of the Calumet and Hecla follow the dip of the lode. Work on it was started in 1889, immediately after the last of the three great underground fires in the older workings of the mine, which did damage of more than a million dollars. Work has been continued upon it night and day since that time, and the shaft stands without a parallel in mining. It is 4,900 feet in depth, or 380 feet less than a mile. It contains six compartments, each equal in size to an ordinary mining shaft, four of which are used for hoisting rock and lowering timber. One shaft is utilized for the ladderways, and the sixth and last compartment carries the wires and pipes for telephones, light, power, water, and compressed air.

On the 14th inst. the ordnance bureau of the Navy Department tested a six-inch steel plate made by the new Krupp process. The plate was manufactured by the Carnegie company and is one of the first samples of the kind which has been tried. It was tested by Carpenter projectiles fired from a six-inch gun. The first shot, at a velocity of 2,030 feet per second, was shattered upon the plate. The second shot, at 2,230 ft. per second, went about half way through the plate. The point of the third shell, at 2,350 ft. per second reached through the plate.

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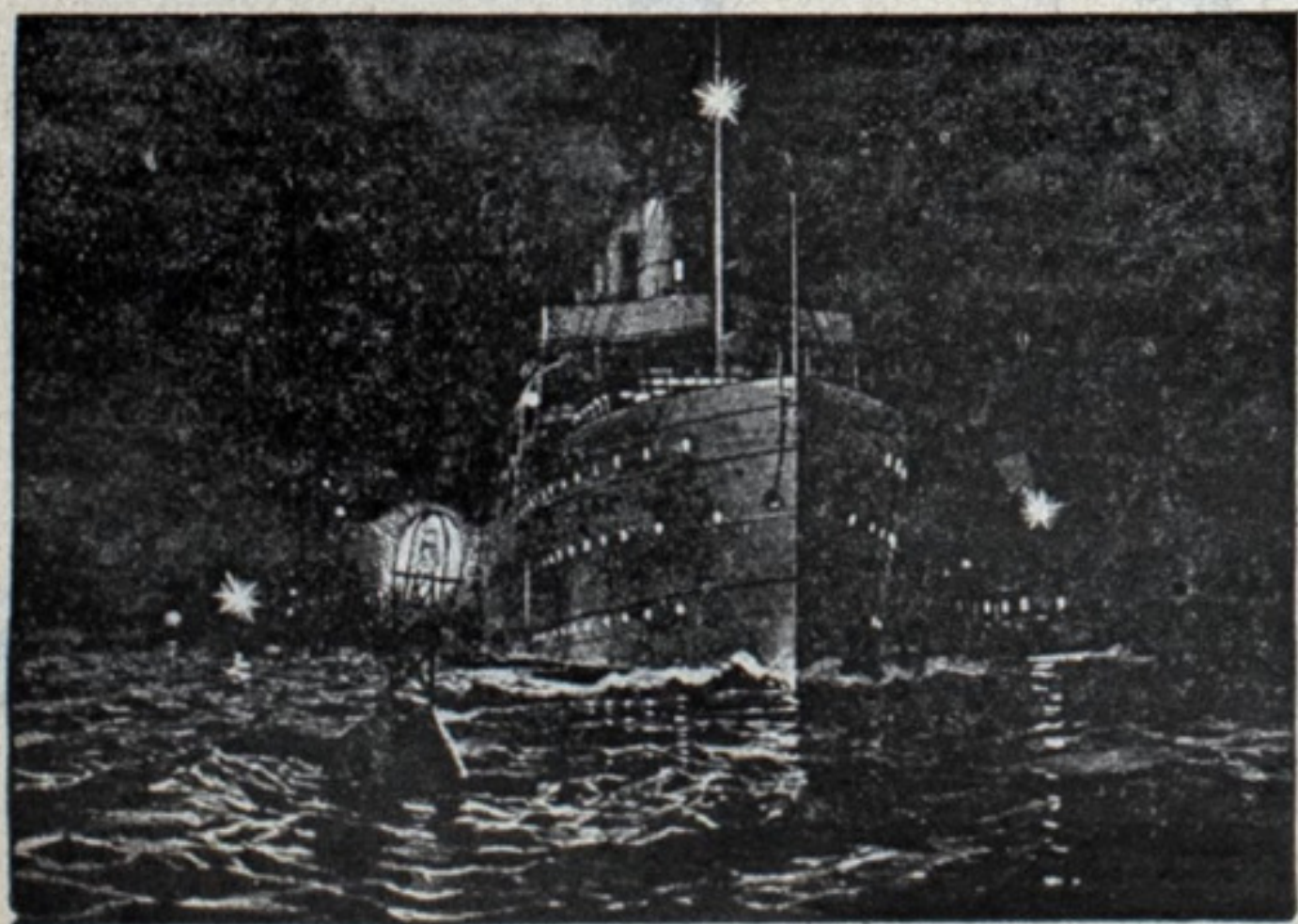
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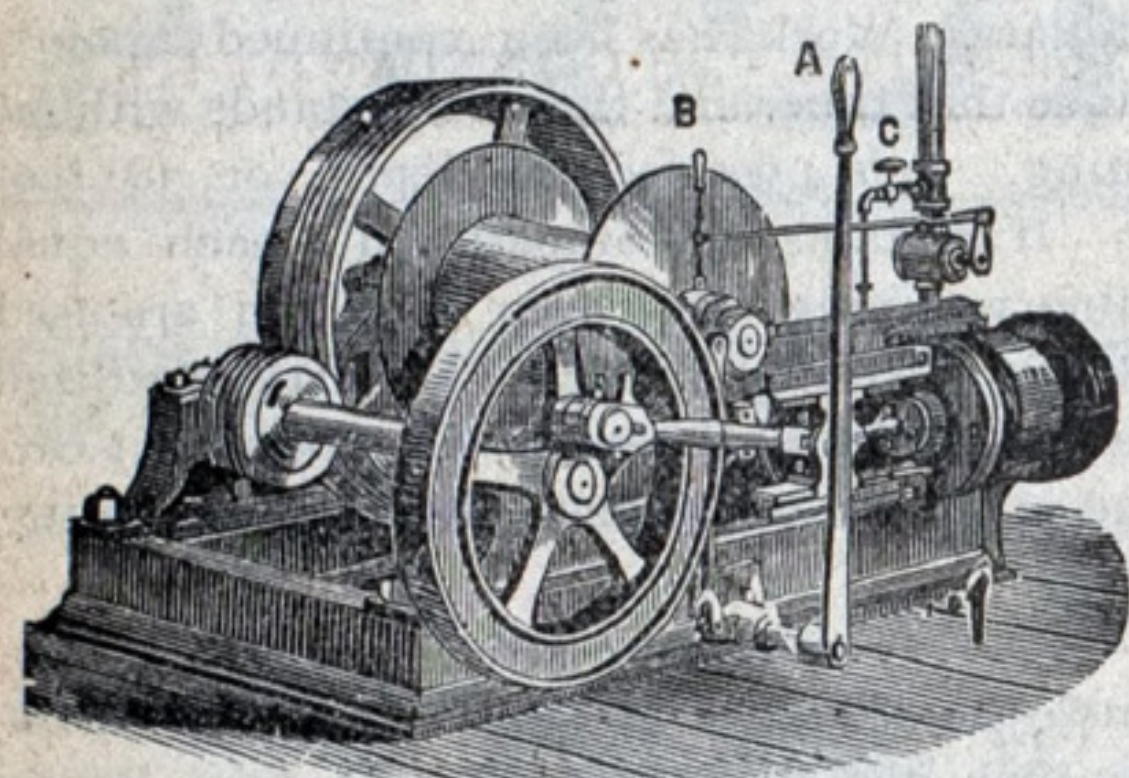
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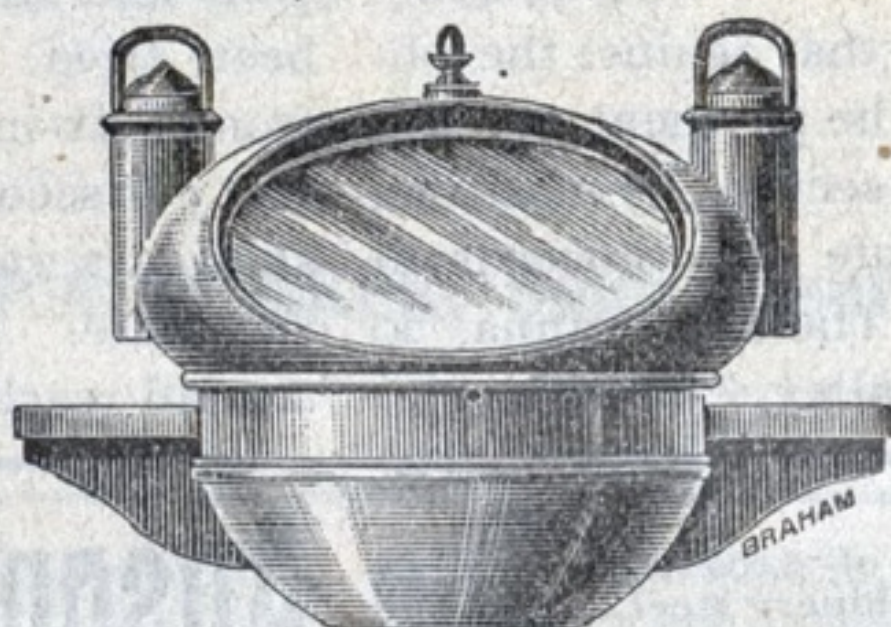
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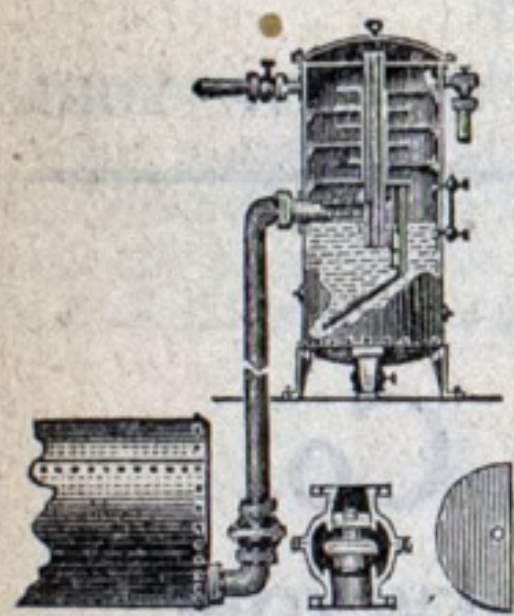
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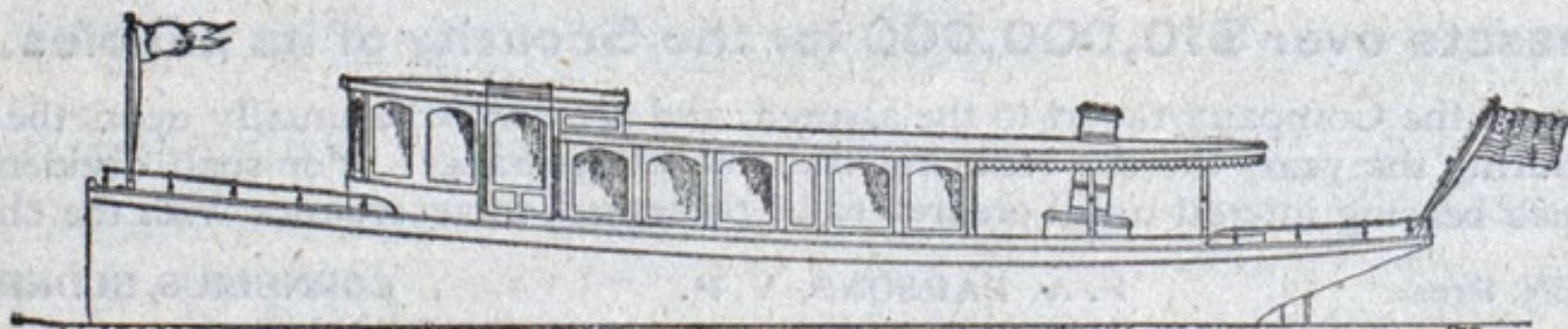
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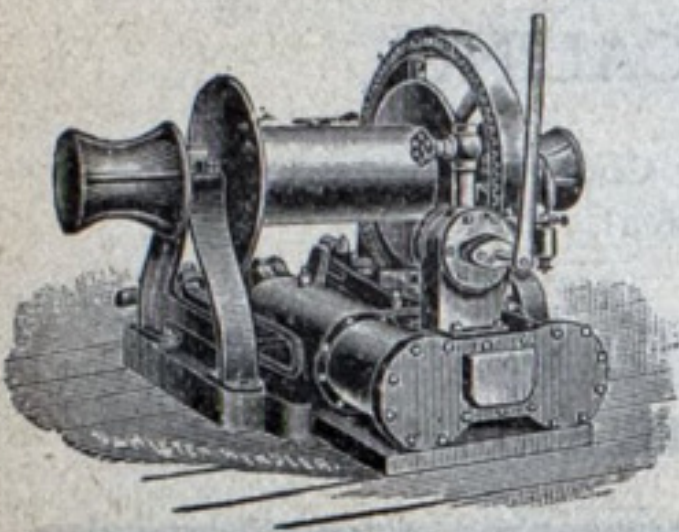
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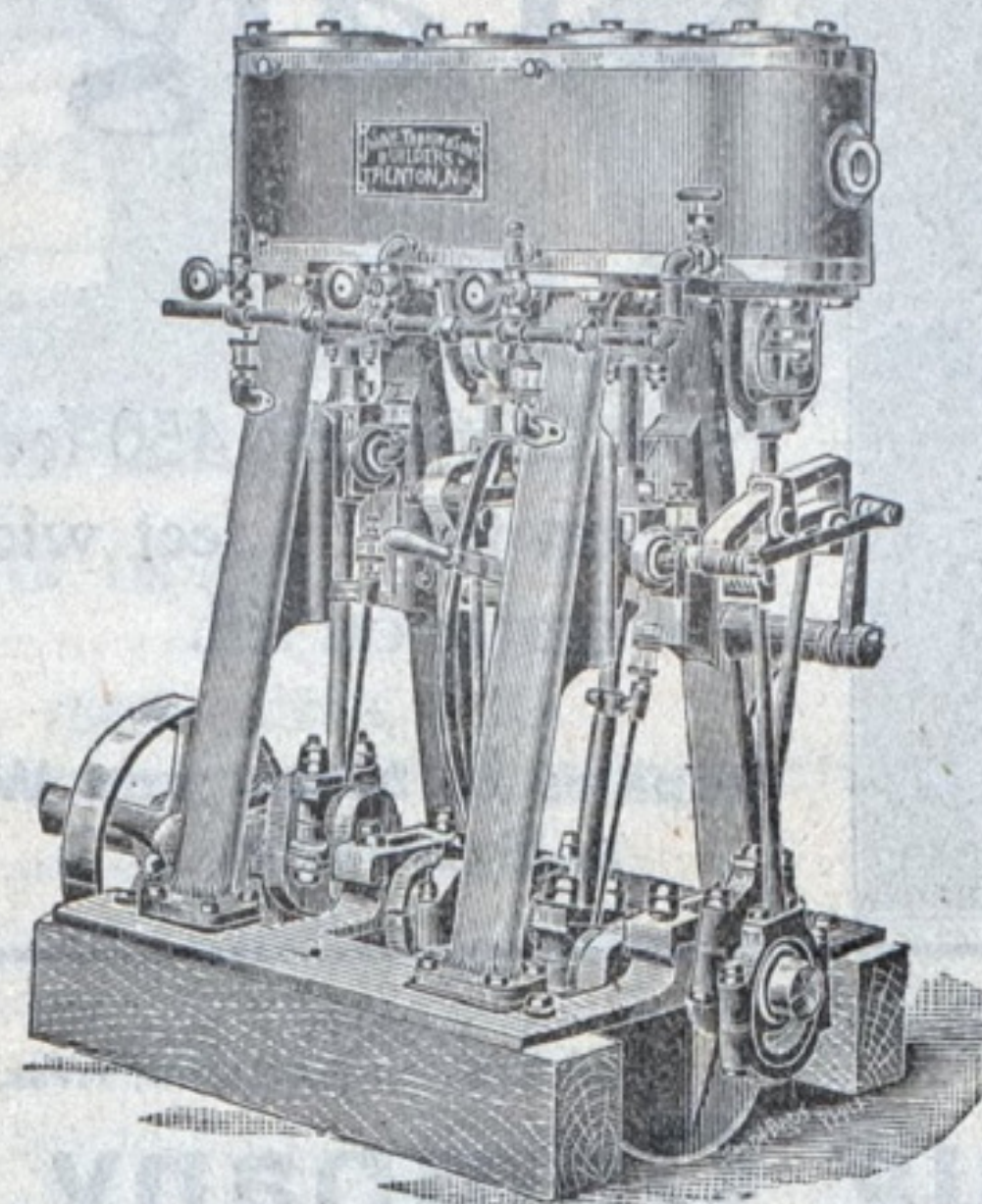
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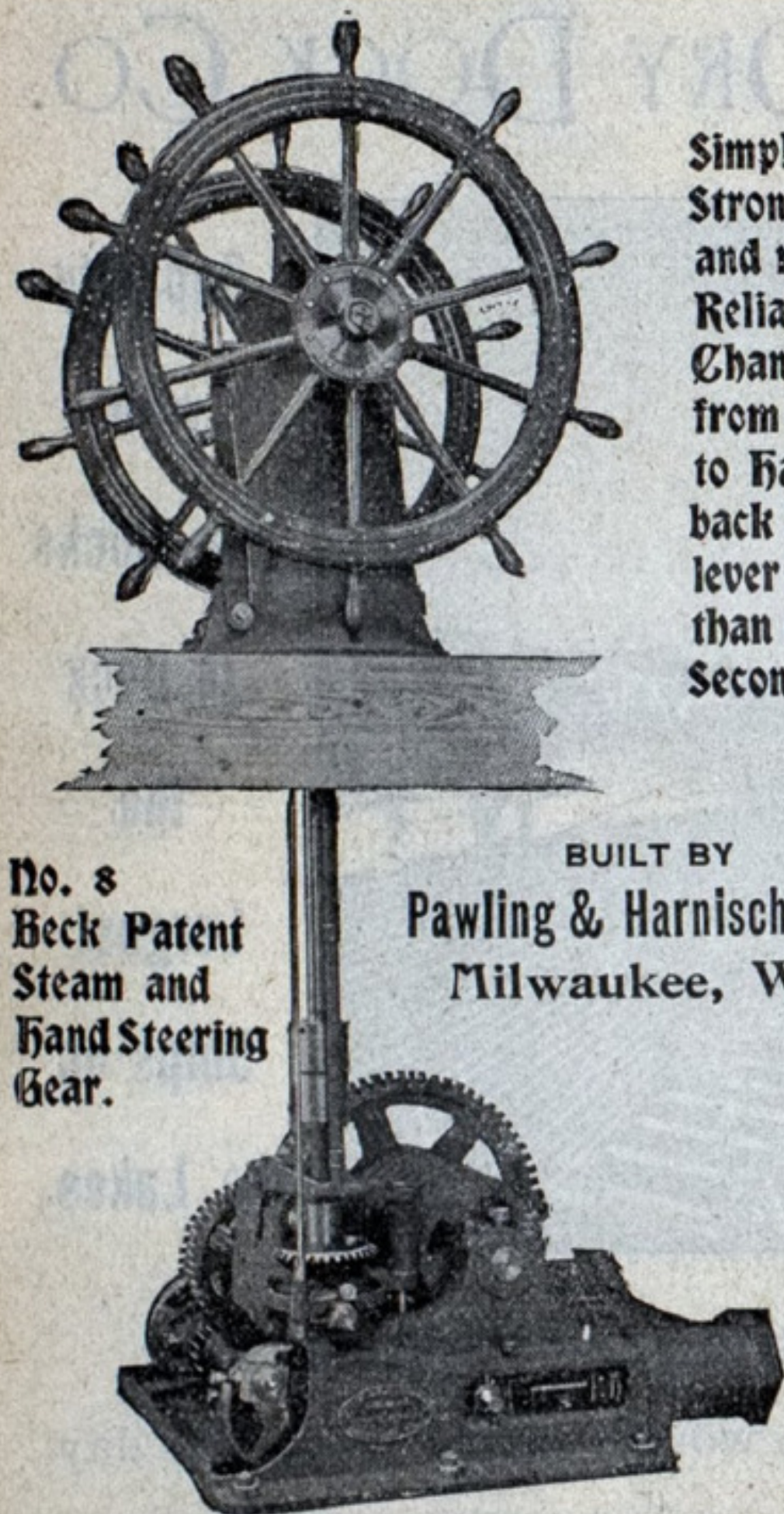
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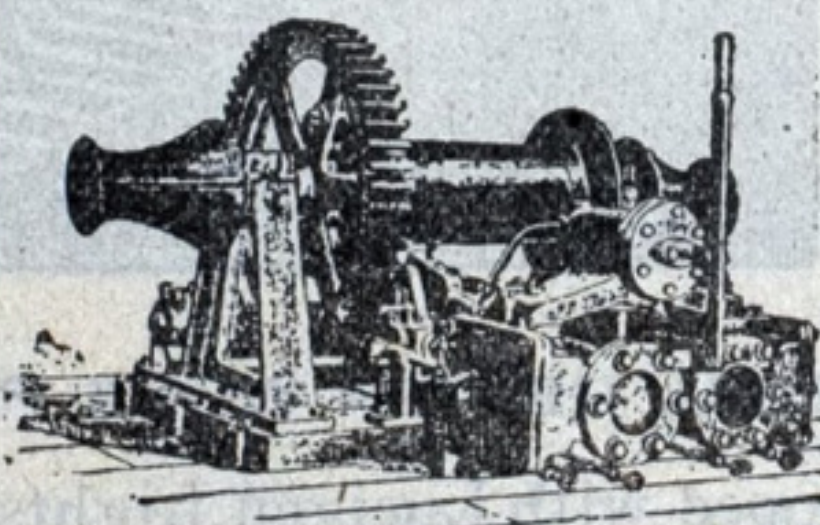
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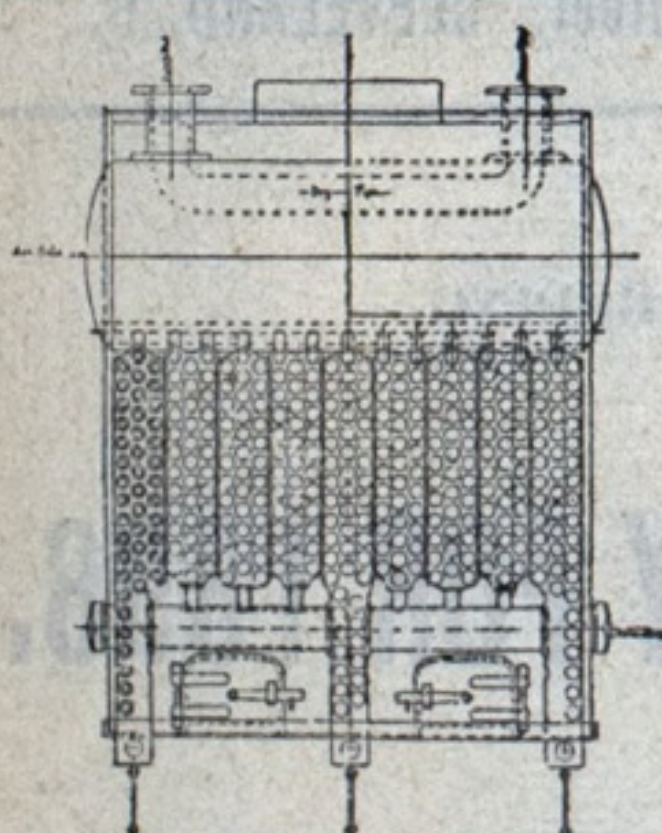
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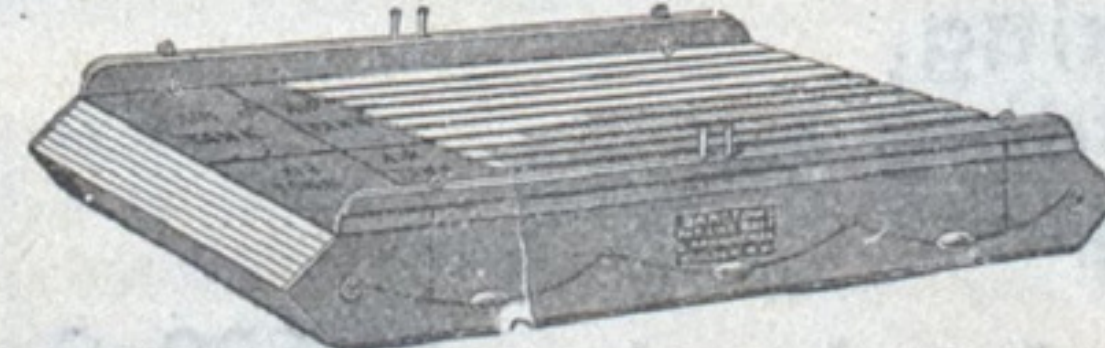
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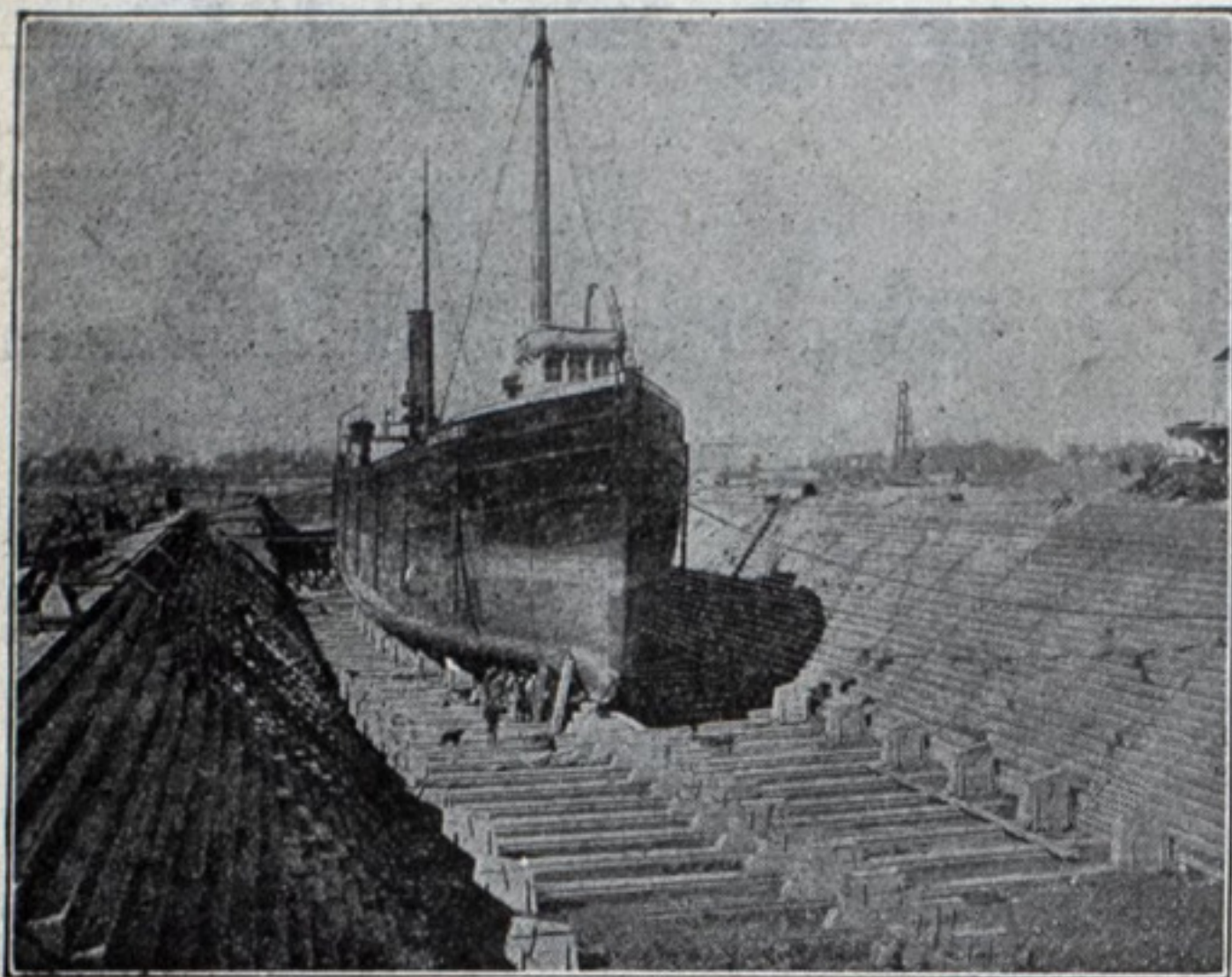


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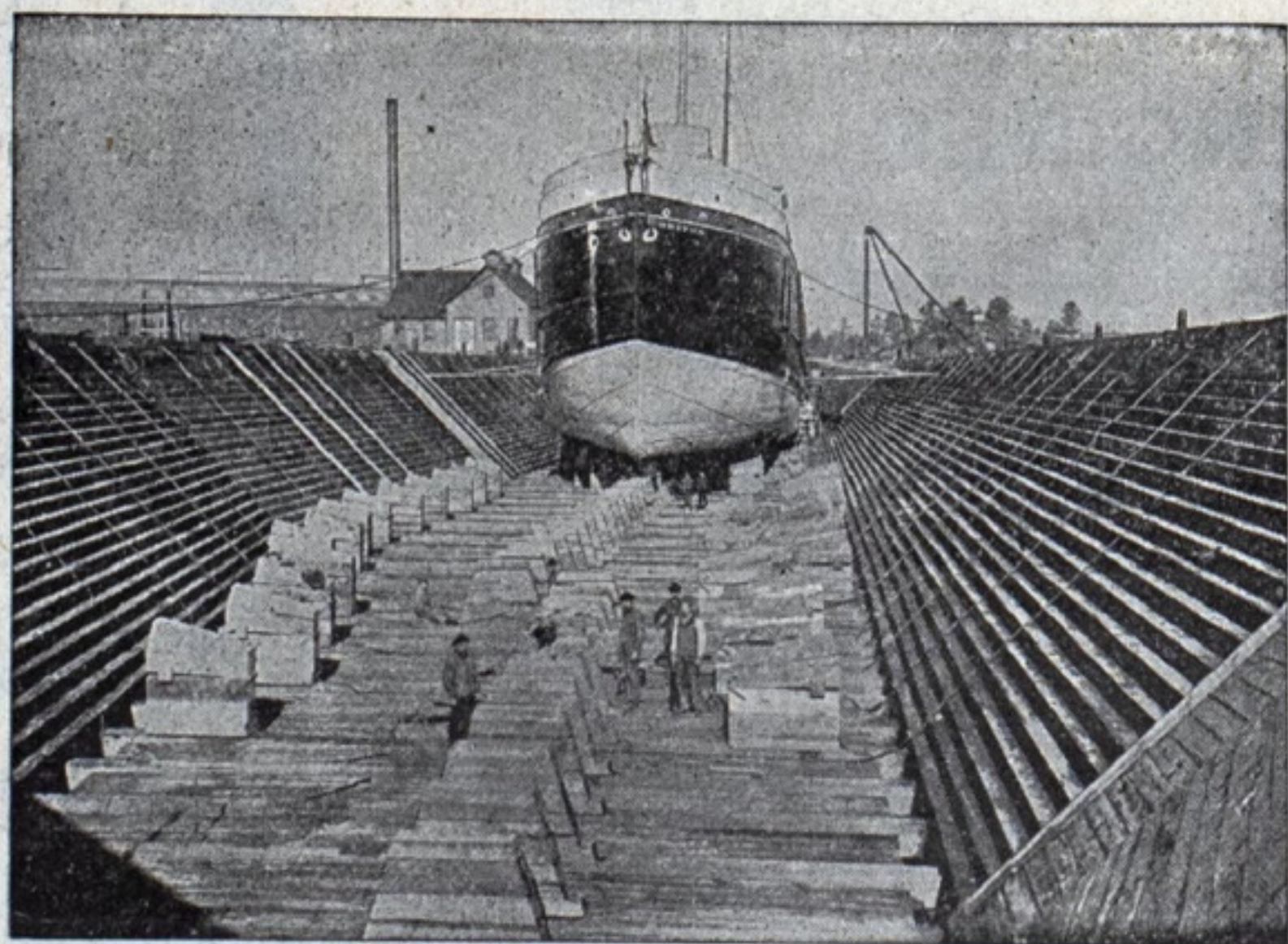
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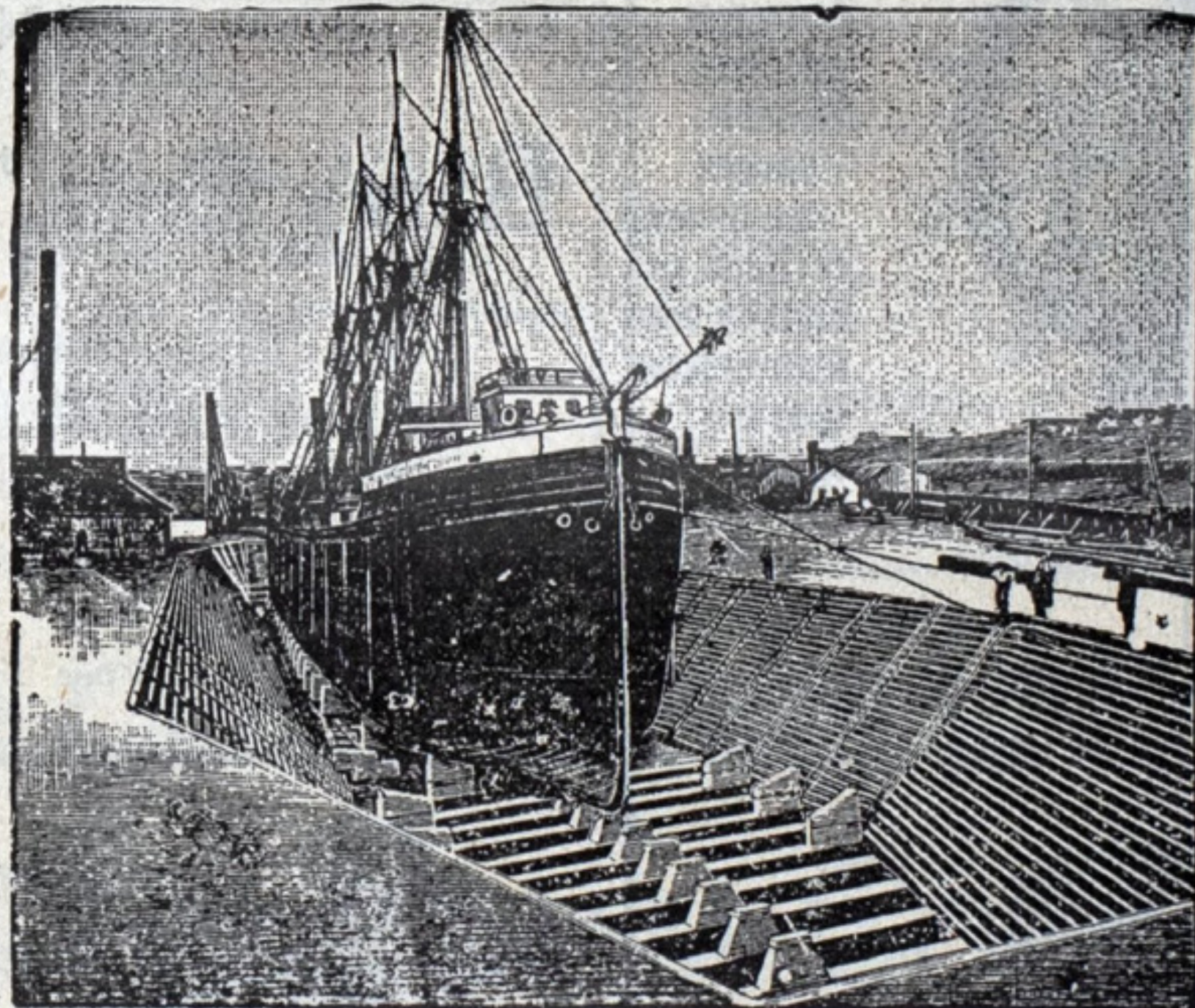
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